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Strategic Planning Committee

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16 October 1991

MEMORANDUM

TO: Water Resources Branch Staff

FROM: Dr. J.S. Ashman
Director

RE: WRB Strategic Directions

I am very pleased to forward to you a copy of the final version of the document entitled Strategic Actions for an Effective and Efficient Water Resources Branch in the 1990's.

As each of you are aware, we are currently being called upon to work in increasingly challenging times; increasing public demand, increasing assault on our aquatic environment, increasing concern about government expenditures, increasing precision in science and information bases, and of course, increasing demand for even more rapid response. These and various other forces are placing before us the very real challenge of being responsive to short term issues while committed to a longer term strategic plan.

It is out of this challenge that our Strategic Directions effort occurred and your response to the challenge and your commitment to that response are the factors which, in the final analysis, will allow us to succeed in our efforts to improve and protect Ontario's water quality. It is my belief that by implementing the recommendations of this report, the Water Resources Branch will be better prepared to deal with emerging and current aquatic environmental issues. Accordingly, I am committed to having much of the report implemented as quickly as possible.

In that regard, a number of activities have already been initiated. The noon hour seminars have been started with presentations been made by Keith Willson and Wolf Scheider. The Long Term Planning Committee has been struck. The first edition of the newsletter is out. The staff orientation program is nearly developed. The Communication Working Group has been selected. The relocation of staff within 1 St. Clair is scheduled for mid-December. The redesign of 1 St. Clair includes an informal lunch/meeting/staff lounge area. Other parts of the plan are also being pursued.

So, here it is and here we go. I look forward to your active participation in meeting the challenge.

J.S. Ashman

JSA/reh

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September 27, 1991

MEMORANDUM

TO: Management Team
Water Resources Branch

FROM: Strategic Planning Committee

RE: TRANSMITTAL OF THE STRATEGIC PLANNING REPORT

The members of the WRB Strategic Planning Committee are pleased to present our report entitled "Strategic Actions for an Effective and Efficient Water Resources Branch in the 1990's". This document is the product of twelve months of consultation and evaluation involving most of the WRB staff.

Based on the committee's collective experience with the Branch and early conversations with staff, the Committee chose to focus on three critical areas described generally as planning, communications and human resources management. With a series of sound strategies for these areas in place, we feel that the Branch will be well positioned to lead in the identification and implementation of water resources protection strategies within the Ministry's overall environmental strategies.

We are extremely grateful for the encouragement and active involvement of Branch staff throughout the process as well as the support and suggestions from staff in other Ministry Branches and the Regions. We have tried very hard to make the Strategic Actions address the concerns expressed by staff and reflect the recommendations that they offered.

The entire effort, however, will be of little value if the recommendations are not implemented. To that end, we have designed an implementation plan that can be readily achieved if there is the will in the Branch to do so. The Strategic Actions should be viewed not as an added workload imposed upon already overworked staff, but as the basis for a new way of doing business. We are certain that the costs of

implementation, in terms of staff time and dollars invested, will be returned many-fold through the delivery of efficient and effective programs.

The completion of this report should not spell an end to the Branch's Strategic Planning process. We are pleased that a member of our Committee, Henri Selles, has been assigned to coordinate future activities including monitoring the implementation process, addressing new or evolving strategic issues and maintaining close ties with the Ministry strategic planning process. We extend the hope that he will enjoy the cooperation that our Committee has received over the past year.

Margaret Tanaszi

John Stager

Henri Selles

John Ralston

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FOREWORD

The Report Layout

"Strategic Actions for an Effective and Efficient Water Resources Branch in the 1990's" is a report in five parts structured, primarily, to present sixteen strategic recommendations designed to assist the Branch in fulfilling its mandate.

Part I - The WRB Mandate - provides a clear enunciation of the Branch's Mission and Role.

Part II - The Branch Today - presents information on the range of Branch activities and the resources (staff and funding) applied in each of four program categories. This section also briefly discusses the Branch's products and clients.

Part III - An Overview of the Plan - provides a general description of each of the sixteen Strategic Actions. These Actions are divided into three areas: Program Development and Planning; Communications - Relations; and Human Resources Management.

Part IV - Detailed Strategic Actions - is the heart of the report. It contains a complete description of the sixteen Strategic Actions introduced in Part III. The importance and purpose of each Action are put forth as well as a description of the current approach to the issue. The proposed approach is described in specific detail and supported by a listing of its benefits. The presentation of each Strategic Action is completed with an implementation plan which includes an implementation schedule, staff responsible for implementation and a listing of deliverables.

Part V - Implementation - reviews, in summary form, the key elements of the implementation plans for the Strategic Actions from Part IV. It provides an overview of the activities needed to make the Strategic Plan work.

Effective Committees

Many of the Strategic Activities involve the formation of committees as part of the implementation plan. In some cases, e.g., Long-Term Planning, the committee carries a major responsibility for seeing that the Action is carried out. In other cases, the committee is formed to perform a specific task, e.g., evaluating alternatives for a Branch library, and is then disbanded. In either event, it is imperative that the committee is efficient and effective.

Any committee formed to implement the recommendations of this report should be comprised of staff who have a fundamental interest in and some knowledge of the task at hand, a clear goal and a schedule or timetable with milestones and a firm completion date. If training is needed to improve the efficiency and effectiveness of the committee, it should be provided.

ACKNOWLEDGEMENTS

The success of the strategic planning report was a direct result of the enthusiastic participation of staff, both inside and outside the Branch, in focus group sessions, where candid discussions of WRB strengths and weaknesses, concerns and suggestions for improvement formed the basis of the report. Subsequently, many practical suggestions for implementation put forward by staff during and after the Branch conference in June further enhanced the value of the process.

The wealth of information provided met our most optimistic expectations. As a result, this report has been able to capture the important issues and formulate practical plans that will be of real benefit to the Branch.

The Committee wishes to express its sincere appreciation to Emelita Lacson for her talented contribution to the production of this report, including document design, preparation and polishing. We could always count on you for a timely and excellent job, Emelita.

Thanks are also due to Anita Foley for assisting with transcriptions, and to Mary Prawecki for the production of the figures.

GLOSSARY

Long-Term (Planning)

extended over a period of time in the order of five years

$ODOE

short for "Other Direct Operating Expenses", it is the Branch fiscal operating budget excluding salaries and benefits, i.e., supplies, services, communications, etc.

Program

an endeavour of considerable scope and duration usually encompassing a number of projects

Project

an undertaking, often limited in duration, with a defined starting point and defined objectives by which completion is identified

Short-Term (Planning)

restricted to the near future (i.e., the fiscal year)

Strategic Plan

a framework guiding the nature and direction of actions to achieve an objective

Strategic Actions

courses of action chosen, within the context of a strategic plan, to achieve the objective

WRB Management Team

composed of the Director, Assistant Director, Managers and the Management Support Coordinator, this group meets regularly to deal with a wide range of issues affecting the functioning of the Water Resources Branch

WRB Extended Management Team

composed of the Management Team (described above) but expanded to include the supervisors from each section. This large group meets only when called to do so by Management Team.

PART I

THE WRB MANDATE

Mission

And

Role

THE WRB MANDATE

The WRB Mission

The WRB Mission Statement defines the range of issues for which the Water Resources Branch has responsibility and authority.

GOAL: TO PRESERVE AND PROTECT ONTARIO'S WATER RESOURCES FOR THE BENEFIT OF THE ENVIRONMENT, INCLUDING HUMAN, AQUATIC AND TERRESTRIAL COMMUNITIES.

The Water Resources Branch will strive to achieve this goal through actions designed to prevent, control or remediate environmental pollution. These actions include:

- the development of policies, objectives and implementation procedures for the protection of water quality and uses, including aquatic and terrestrial biological communities.
- the development of programs and regulations to control municipal and industrial waste water discharges and other sources of pollution such as agricultural drainage, urban storm drainage, spills and atmospheric deposition.
- policies and programs designed to ensure the provision of safe drinking water
- monitoring, assessing and public reporting of aquatic environmental conditions, emerging problems and trends in Ontario's surface and ground water resources
- the development of remedial programs leading to the restoration of acceptable quality in contaminated areas of the Great Lakes, inland lakes and river basins
- the provision of information on Ontario's aquatic environment that will advise, educate and encourage public involvement in the management of water resources

The goal will be achieved by working in close cooperation with other MOE Branches and regions, the public, other Ontario ministries, industry, municipalities and other national and international agencies.

The WRB Role

The WRB Role Statement defines how the Water Resources Branch will conduct itself in addressing its Mission.

Each of the focus groups, both internal and external, discussed the role of the Water Resources Branch. On the basis of comments from these sessions, the WRB Role can be described as follows:

LEADERSHIP, GUIDANCE and SUPPORT

Example of WRB activities related to these functions are:

i) LEADERSHIP

- "Foresight" in identifying emerging emerging aquatic environmental issues
- "Focus" on those issues of greatest importance to Ontario's water resources
- "Direction" as to how best to address the issues of greatest concern
- "Coordination" of all appropriate resources inside and outside the Branch needed to deal with such issues

ii) GUIDANCE

- Development of water resource protection "Policies", "Objectives" and "Implementation Procedures"
- Preparation of water resource management "Regulations"
- Initiation of "Province-wide water resource initiatives" such as surveillance and control programs

iii) SUPPORT

- The maintenance and provision of "Special Skills and Expertise" that may be unique to the Ministry
- The provision of specialized "Technical Facilities" (e.g., toxicity laboratories, Great Lakes vessels) for environmental programs and research
- The development and maintenance of comprehensive "Data and Information Bases"
- The interpretation of data and the provision of information for "Public Information and Education"

PART II

THE BRANCH TODAY

THE BRANCH TODAY

Before entering into a discussion of strategic actions that will substantially influence the future directions of the Water Resources Branch, it is important to assess where we currently stand.

As part of the strategic planning process, draft 1991 program and project plans were submitted by each section and assessed in several ways.

Allocation of Resources

All program/project plans were sorted into four program categories:

- Abatement and Prevention
- Surveillance and Monitoring
- Research and Technology
- General Administration

Definitions of these four terms are provided in the detailed description of the Strategic Action for Short-term (Annual) Planning in Part IV of this report.

Figure 1 shows an aggregate of the resources, $ODOE and person years applied by the Branch in each program category.

Each program category was further divided into four "subcategories":

- Science
- Policy
- Data/Information Management
- Program Coordination and Support

These are also defined in the detailed Short-term Planning Strategic Action.

Figures 2 through 5 show the allocation of resources for each "subcategory".

While this "snap-shot" assessment of resources allocation is interesting, and probably reflects the relative balance of activities in the Branch over the last several years, the greatest use of this type of assessment will come in the future. Accurate information along these lines will be kept for each year and trends evaluated to determine if an appropriate balance of activities is being maintained in light of the Branch's long-term plans.

A complete listing of WRB programs and projects is contained in Appendix 1.

FIGURE 1: BREAKDOWN OF WRB PROGRAMS

% of Total WRB Resources

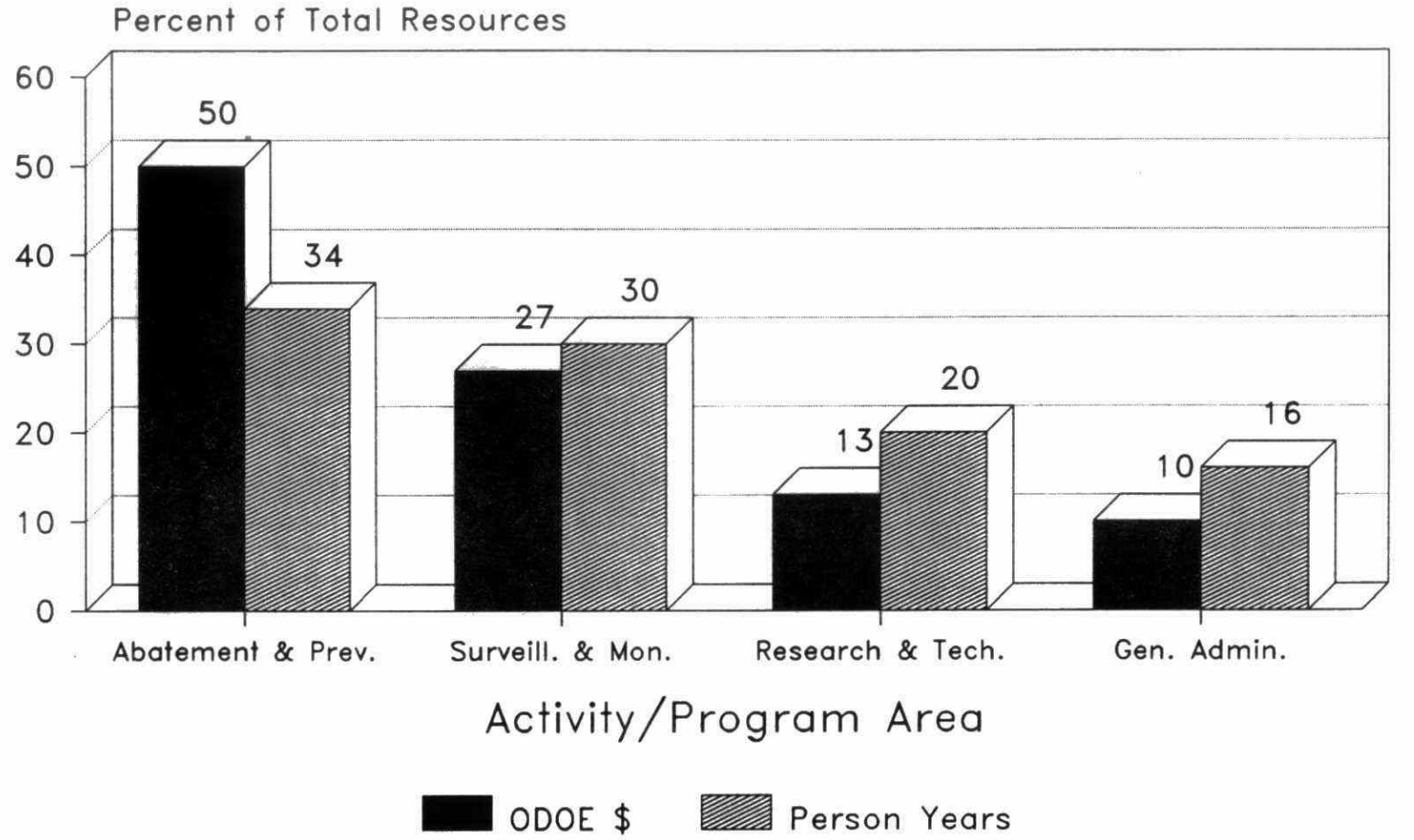


Figure 2

ABATEMENT AND PREVENTION

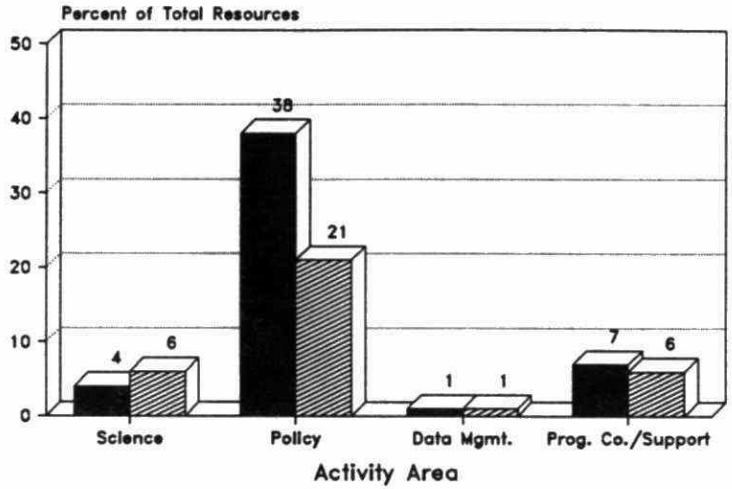


Figure 3

SURVEILLANCE AND MONITORING

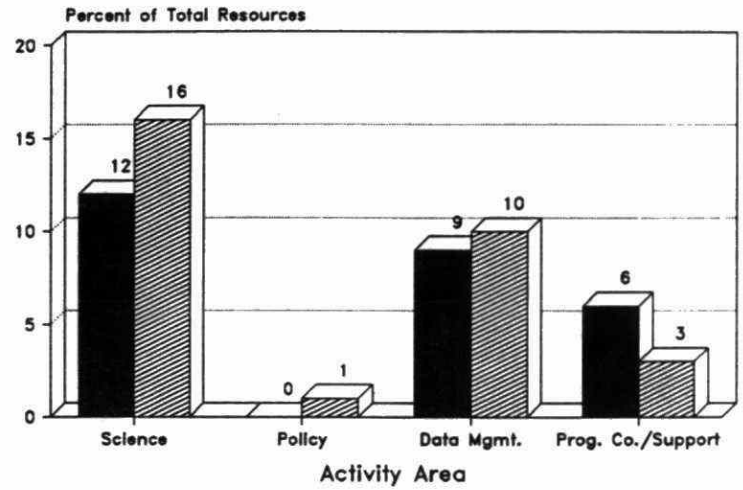


Figure 4

RESEARCH AND TECHNOLOGY

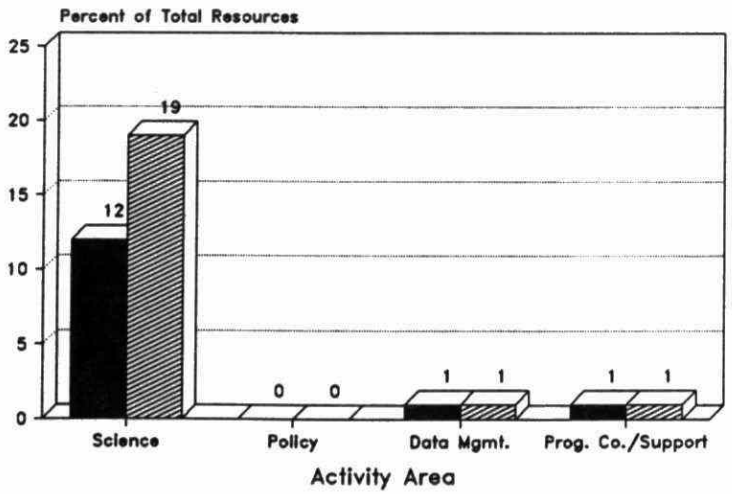
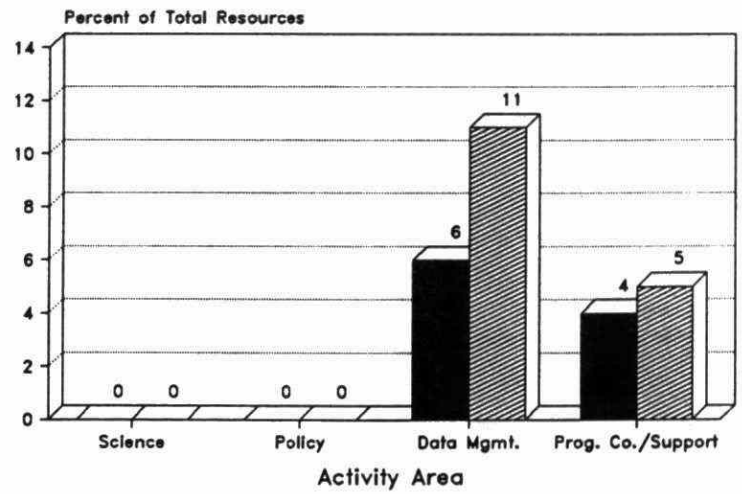


Figure 5

GENERAL ADMINISTRATION



Products and Clients

An important aspect of annual program/project planning in the future will be the specific identification of "products" and "clients". Summary sheets submitted by each section for the 1991 plans contained some information in these areas.

A listing of major Branch products indicates that the majority (over 2/3) of all products are technical reports, scientific reports and papers for journals. The remaining products listed, in descending order, are:

- Data Bases/Data Management Requirements
- Regulations/Policies/Objectives
- Models
- Enforcement Support
- Public Information Reports

With respect to clients, no particular individual group dominated the listing, but the MOE Regions were first at just over 20%. The list, in descending order, is as follows:

MOE Regions
RAP Projects
Municipalities
APIOS Program
MISA
WRB
MOE
Other MOE Branches
MNR
Public
IJC/COA
* Client not identified*
OMAF and other Ministries
Federal Agencies
Consultants
Industry

Specificity with respect to both products and clients was, for the most part, inadequate. While this might have been, to some extent, a reflection of the process by which the Strategic Planning Committee sought the information, it does suggest that more attention will have to be paid to detail and accuracy at the draft program/project development stage. This will be addressed in the appropriate Strategic Actions.

PART III

AN OVERVIEW OF THE PLAN

AN OVERVIEW OF THE PLAN

Understanding, protecting and managing Ontario's water resources will continue to be a major challenge through the 1990's. In fact, with our ever-improving methods to detect, assess and control environmental hazards along with public expectations for a cleaner environment, the challenge will be even greater in the years to come. The staff of the Water Resources Branch must be properly positioned to meet the challenges ahead of us.

The Plan is developed under three Strategic Directions:

A. Program Development and Planning
B. Communications/Relations
C. Human Resources Management

Within each Strategic Direction, a series of Strategic Actions (Figure 6) have been developed and are highlighted on the following pages. Many of the Strategic Actions are supported by proposed implementation procedures. Those procedures are described in detail in Part IV of this report.

FIGURE 6

STRATEGIC DIRECTIONS

A. PROGRAM DEVELOPMENT AND PLANNING

Strategic Actions:

1. Long-term planning
2. Short-term (annual) planning
3. Program Integration
4. Information Systems Planning
5. Project management
6. Managing environmental crises
7. Research management

B. COMMUNICATIONS - RELATIONS

Strategic Actions:

1. Directory of staff expertise
2. Internal communications
3. Communication with clients
4. Communication with the public

C. HUMAN RESOURCES MANAGEMENT

Strategic Actions:

1. Orientation
2. Training/Skill Development
3. Feedback/Assessment/ Evaluation
4. Retaining staff expertise/ succession planning
5. Accommodation/Facilities

STRATEGIC DIRECTION

GROUP A

PROGRAM DEVELOPMENT AND PLANNING

THE PROPOSED PLANNING PROCESSES - AN OVERVIEW

The application of comprehensive and consistent procedures for long-term planning and short-term (annual) program/project planning are essential if the Water Resources Branch is to be relevant and successfully fulfil its role in the Ministry of the Environment. Based principally on the comments and suggestions from Ministry staff inside and outside the Branch, detailed procedures have been developed for undertaking Branch-wide, long-term planning as well as short-term (annual) project planning by the Sections. In both processes, the involvement of Branch staff and consultation with MOE senior management, our clients, stakeholders and peers outside the Branch and Ministry is fundamentally important. Components of the WRB Planning Process are shown in Figure 7.

The comprehensive, long-term planning process is undertaken every four years and, considering the substantial amount of information to assess and consultation required, takes about a year to complete. It is reviewed and revised, if needed, annually.

Short-term (annual) program/project planning reflects the directions of the WRB Long-term Plan. Draft work plans are prepared by each section and presented to the WRB Management Team for endorsement. When these are implemented, there is on-going follow-up. Each program or project is tracked by the Section and chronic problem areas are addressed by the Management Team.

The diligent application of long-term and short-term planning processes will resolve many of the weaknesses and shortcomings of the Water Resources Branch that have been identified by staff inside and outside the Branch and documented by the Strategic Planning Committee. The Branch will assert its proper role of leadership and be in a better position to provide direction, guidance and support in the protection of Ontario's water resources. Branch staff, at all levels, will have the opportunity to play a greater role in planning and have an increased sense of involvement in Branch functions. Consultation required in both long and short-term planning will greatly improve communications within the Branch as well as with clients, stakeholders and peers. Comprehensive and open planning processes will enhance the opportunities for partnerships and cooperative programs.

In summary, comprehensive planning will alter and enhance the way that the Branch does business, improve its image and credibility, and strengthen staff morale and improve response to corporate priorities.

A.1 LONG-TERM PLANNING

The Water Resources Branch will develop a long-term planning process that will identify future program direction for the Branch and provide a basis for short-term program planning.

In recognition of the WRB Role to provide leadership and direction in protecting Ontario's water resources, the Branch will implement a procedure to undertake a comprehensive, coordinated, long-term planning process.

The WRB Management Team will appoint a task force of supervisors to oversee the planning process. All Branch staff will have the opportunity to contribute to the plan. Senior MOE management, partners and clients in the Regions, other branches, other ministries and other jurisdictions will be consulted while the plan is being prepared.

The information collection, evaluation and consultation processes, which are fundamental to the long-term planning procedure, are substantial and will be carried out, in full, every four years beginning in October, 1991. In the years between full implementation of the procedure, the plan will be reviewed and, if necessary, modified to reflect emerging issues or other factors that might affect the Ministry's direction.

The Water Resources Branch Long-term Plan will serve as a basis for the annual program and project plans prepared by each section. (See Detailed Strategic Actions, Part IV, page 45.)

A.2 SHORT-TERM PLANNING

WRB will apply a consistent short-term planning process to clearly identify annual program activities and provide for follow-up.

In preparing proposals for the upcoming year, all program and project leaders will ensure that their proposed programs are consistent with the WRB long-term planning priorities. They will also be required to follow a comprehensive, Branch-wide procedure for planning and describing proposed programs that incorporates such consideration as precisely identifying the programs' immediate client(s), product(s) and clients' use of the product. Each proposal will contain a communications plan indicating required contact with client(s) and stakeholders while the proposal was being prepared, during implementation and, after completion, follow-up. Each proposal will also contain a detailed schedule and measurable milestones. These will subsequently be used to evaluate the status of work underway. Detailed resource requirements will also be presented.

Subsequent to the preparation of individual proposals, each section's manager and supervisors will evaluate the proposals and select the priority projects for inclusion in the section's draft work plan.

The plans will be presented, in summary form, by each manager to the WRB Extended Management Team. At this point there will be final opportunities for program integration or partnerships not identified through the Branch's Long-Term Plan or initiated at the early program planning stages. The Management Team can accept, reject or request changes to proposals before each section's work plans are formally approved.

Summary versions of the WRB Work Plans are distributed to all Branch staff, as well as to the Regions and other appropriate branches or agencies to keep them apprised of Branch programs.

Throughout the implementation phase of a program, progress will be monitored by each section's supervisors and managers. Programs not meeting schedules or milestones will be brought to the attention of the Management Team along with a proposed plan to remedy the situation. Management Team may cancel programs that are seriously failing and may apply any unspent resources from that program to other priority undertakings. The short-term planning process will be initiated in the fall of 1991 for the 1992-93 planning cycle. (See Detailed Strategic Actions, Part IV, page 53.)

A.3 PROGRAM INTEGRATION

The Water Resources Branch will incorporate opportunities, within both long-term and short-term planning, for integration of programs in the Branch, and involve external stakeholders in the process.

WRB undertakes a number of different types of programs. The Branch will promote a process of program integration to ensure programs are developed and delivered within a common framework and vision.

As part of the long-term planning process, the Branch will determine areas of focus in terms of program categories (i.e., Surveillance and Monitoring, Research and Technology, etc.). Focus group will then be held with staff involved in those categories to determine possibilities for integrated program development. Output from the focus groups will serve as guidelines for section work plan development.

All section work plans will be presented to Management Team in a summary format, by category. Management Team will then review the work plans to ensure consistency with the long-term plan, and will determine any further opportunities for integration. Staff responsible for programs of similar categories will conduct seminars twice a year to discuss category status and topics relevant to the category.

Better integration with external stakeholders and Regions will be encouraged. External stakeholders will be involved in the long-term planning process and help set directions for the Branch. With respect to Regional staff, a WRB-Regional liaison process will be strengthened in that key Branch and Regional staff will meet on at least an annual basis to discuss issues of mutual concern. (See Detailed Strategic Actions, Part IV, page 73.)

A.4 INFORMATION SYSTEMS PLANNING

The WRB will develop management information systems that stimulate both the creative use of information technology and an integrated approach to information management.

The Water Resources Branch recognizes the importance that the effective use of data plays in the delivery of our programs. The Branch will implement an extensive information systems planning process with the establishment of an Information Systems Project Team operating under the general direction of the WRB Management Team. This group will include in-house computer and systems specialists, database managers and data/information users. A consultant will be retained as a facilitator to guide the process and provide technical advice.

The Planning Team will initially establish the terms of reference and detailed scope of the project. Following this, a detailed analysis of current information and future needs will take place. This will include hardware, software, information processing, communications environments and existing systems staff organizations. The implementation of focus group sessions will ensure that all staff will have the opportunity to participate in the analysis process. The Project Team will also look at current information technologies and how the implementation of appropriate technology will improve both our efficiency and effectiveness.

The integration of data has been identified by virtually all focus groups as a critical requirement of systems development and will certainly be an important component of information systems planning. Generally, the process of data integration will include the compilation of an inventory of all databases, evaluation and development of a data dictionary to direct the automation and distribution of data. The plan will ensure, through a staged implementation process driven by program priorities, the migration of existing date processing systems to an integrated, shared data environment.

Once all of the analyses are carried out, a comprehensive information systems plan will be developed, detailing the Branch direction in terms of information processing, hardware, systems software and also a staff organization architecture to most effectively accomplish the plan. (See Detailed Strategic Actions, Part IV, page 77.)

A.5 PROJECT MANAGEMENT

The Water Resources Branch will develop project management principles and applications to effectively manage both large and small projects.

WRB carries out a large number of programs and projects that vary greatly in terms of scope and complexity. Effective project management is critical to ensure proper development and timely delivery of Branch programs. The existing infrastructure will accommodate a project management approach to delivery of both complex and easily-managed projects.

For larger, more complex undertakings (i.e., MISA, RAPs), project managers will be designated. Their responsibilities will include planning, scheduling, project coordination, and cost/quality control. Summaries of all major projects will be incorporated into a Branch Master Summary Schedule. Once realistic project schedules are developed, bi-weekly project update meetings will be held to assess progress and address problem areas. Project managers will also meet with the Director on a monthly basis to discuss overall progress. The Branch Master Summary Schedule will be updated and monthly update reports will be issued at this time.

Smaller programs and projects that are more easily managed will be handled within the existing sectional organizations. Project leaders will develop project plans, and unit supervisors will ensure consistency with other plans in the unit. A summary of unit project milestones will be maintained by the supervisor, and updated with project leaders on a bi-weekly basis. The Section manager will also meet with unit supervisors on a bi-weekly basis to discuss project status. Section managers will maintain an up-to-date status report of Section projects and will be prepared to discuss problem areas and potential solutions at Management Team meetings.

Training in principles and applications of Project Management, and use of Project Management software will be provided for staff. (See Detailed Strategic Actions, Part IV, page 81.)

A.6 MANAGING ENVIRONMENTAL CRISES

The Water Resources Branch will develop and implement systematic procedures to effectively manage environmental crises and other unscheduled events.

The WRB will implement a systematic approach for efficiently fulfilling its role in responding to environmental crises and other major unscheduled events. The approach will clearly identify, to staff inside and outside the Branch, the command structure for handling the WRB role in crises. By this scheme, WRB involvement will be directed by trained and experienced personnel who will evaluate the significance of the crisis (normally a request for assistance from the regions or the Spills Action Centre) and implement an appropriate response.

The approach will ensure provision of the best scientific and technical support available while minimizing disruption to scheduled Branch activities. (See Detailed Strategic Actions, Part IV, page 87.)

A.7 RESEARCH MANAGEMENT

The WRB will encourage and support in-house and external research related to current projects and the long-term directions for water resource management.

The Water Resources Branch will actively support the continuation of focussed and productive research and technology development as it relates to the wide range of aquatic environmental issues through:

- Coordinated WRB involvement in RAC and the other funding programs of the Research and Technology Branch, e.g., Environmental Technologies Program.

- Planning, encouragement and support of coordinated in-house research related to Branch programs and projects.

(See Detailed Strategic Actions, Part IV, page 93.)

STRATEGIC DIRECTION

GROUP B

COMMUNICATIONS - RELATIONS

B.1 DIRECTORY OF STAFF EXPERTISE

The Water Resources Branch will develop and maintain a directory of staff expertise, for managing environmental crises, and assisting other MOE staff as required.

WRB will develop and maintain a computerized Directory of Staff Functions and Expertise to serve a number of purposes. It will help meet the Branch's need to manage environmental crises efficiently, and encourage intra-Branch communications and program integration by making WRB expertise available to MOE staff, as well as staff from outside the Branch as required.

This information base will be available to all WRB staff and appropriate groups outside the Branch. The information, accessed by keywords, will identify individual members of staff, their functions and responsibilities as well as their special skills, experience and knowledge.

The Directory will be developed and maintained under the direction of the WRB Assistant Director. Each member of staff will prepare and periodically update his/her own information for the Directory. (See Detailed Strategic Actions, Part IV, Page 99.)

B.2 INTERNAL COMMUNICATIONS/ TEAM BUILDING

The Water Resources Branch will develop an organizational climate that promotes a high level of interaction between all staff.

Steps will be taken by the Branch to improve formal and informal communications within and among sections in the Branch, and accordingly promote team-building. This will be accomplished in the areas of general, program and electronic communications, as well as physical modifications to encourage intra-section and intra-Branch communications.

General Communications

The Branch will promote regular section meetings, hold luncheon seminars on professional topics, publish a Branch newsletter, conduct an annual Branch staff retreat, and compile an inventory of staff skills, expertise and experience.

Program Communications

Staff will work in an inter-sectional capacity through involvement in three major activities: in the development of long-term Branch plans; in an analysis of programs for possible integration with other section programs and for appropriate partnerships as part of the yearly planning cycle; in meetings twice a year with staff working in the same broad program category, e.g., Abatement and Prevention, Research and Technology, etc.

Electronic Communications

The Branch will ensure that all staff at all locations will be able to easily communicate with one another not only with a reliable telephone system but also by computer.

Physical Modifications

The Branch will attempt to locate staff of the same section in the same working area, and will designate a common area as a staff coffee lounge at 1 St. Clair Avenue West.

(See Detailed Strategic Actions, Part IV, page 105.)

B.3 COMMUNICATION WITH CLIENTS

The Water Resources Branch will recognize clients' interests as an integral part of program development and incorporate these needs in both its long and short term planning processes.

Staff of the Water Resources Branch produce a wide variety of products and services and each one should be designed to meet the specific needs of a client. Clients can range from the co-worker in the next office to the general public, and communication with each of our clients is essential at all stages of an undertaking.

Several staff inside and outside the Branch commented on our inability or lack of willingness to effectively communicate program information. Accordingly, a number of the Strategic Actions incorporate a requirement to communicate with our clients.

In the Long-term Planning Strategic Action our clients' future needs and expectations are identified and considered when developing our plans.

In the Short-term (Annual) Planning Strategic Action program/project leaders are required to consult with their client(s) while formulating the plan, while the program is being implemented and, as part of the follow-up process, after the product has been delivered.

Communication with our clients is also addressed in the Strategic Actions for Project Management, Program Integration and Managing Environmental Crises. The recommended Directory of Staff Functions and Expertise is, in itself, an important contribution to improved communications.

(See Detailed Strategic Actions, Part IV, page 109.)

B.4 COMMUNICATION WITH THE PUBLIC

The WRB will develop a WRB communications vision and, in concert with the Public Affairs and Communications Services Branch, will develop a communications plan.

A detailed WRB action for communicating with the public will be based on a cooperative effort of both the Water Resources Branch and the Public Affairs and Communications Services Branch. In light of the growing importance of public education and involvement, the WRB can and must start today to formulate its public communications vision for water resource issues in Ontario.

Key questions to be addressed are:

- What types of information does the public want and need?
- What types of information is the WRB in a position to supply?
- What are the most efficient and effective methods of conveying our information?
- What are the most effective ways of obtaining feedback from the public?

The Director, in consultation with the Management Team, will form an ad hoc committee of staff with practical experience in dealing with the public to address these and other appropriate questions. This Communications committee will conduct the exercise over a term of no more than three months and produce a report for Management Team to consider. The report will address key components of a communications plan for the Branch, including: establishing who the Branch's clients are, defining the products the Branch will deliver, and training staff for dealing with the media. Once approved, a WRB delegation will work with appropriate staff of the Public Affairs and Communications Services Branch to refine the vision, define relative responsibilities and take action. (See Detailed Strategic Actions, Part IV, page 113.)

Note: A substantial amount of information on communicating with the public has been collected from the Strategic Planning Focus Groups. This information will be available to the ad hoc committee.

STRATEGIC DIRECTION

GROUP C

HUMAN RESOURCES MANAGEMENT

C.1 ORIENTATION

The Water Resources Branch will, in cooperation with the Human Resources Branch, ensure that all new WRB staff receive appropriate orientation.

Understanding the structure, functions and procedures of the Ministry of the Environment and specifically the Water Resources Branch is fundamentally important for a new employee. The Water Resources Branch will provide to all new staff, shortly after they come on-board, an introduction to the Branch - its roles, its responsibilities, and its relationship to the rest of the Ministry. The orientation package will include:

- The Ministry
  - Branches
  - Regions
  - Boards and Committees
- The Branch
  - Sections
  - Programs and Activities
- "How to Survive"
  - Procedures
  - Routines

The orientation package will be composed of visual presentations, textual material and tours of WRB sites/MOE Lab.

(See Detailed Strategic Actions, Part IV, page 119.)

C.2 TRAINING/SKILL DEVELOPMENT

WRB will ensure that all staff training needs are identified and appropriate developmental opportunities are provided.

The ultimate success of the Water Resources Branch rests principally on the competence and effectiveness of its staff. This requires the encouragement of training and skill development on the part of management. Staff must also accept the need for regularly refining their skills and expanding knowledge. Both are essential for success and advancement of the individual and the organization.

Training and skill development (technical, administrative or management-oriented) can be effective only if needs are carefully evaluated. The training/development is then linked to the individual's skills deficiencies, job demands and/or career aspirations in a planned, incremental and regularly evaluated process.

A three-part training and skill development process will be used in the Water Resources Branch:

- All employees working with their supervisors will identify a personal training/skill development plan.
- Appropriate training opportunities are **guaranteed** to all staff at least once year.
- The status of staff development plans are reported annually by each manager to the Branch Director and a central inventory is maintained.

(See Detailed Strategic Actions, Part IV, page 123.)

C.3 FEEDBACK/ASSESSMENT/EVALUATION

The Water Resources Branch will promote open and honest interactions among staff and incorporate practices to foster the best performance possible.

Open and honest relations among staff promotes good performance. Many participants in the focus group sessions felt strongly that enlightened staff relations, including recognition of staff achievements and open interaction between line staff and management staff, are critical if the Water Resources Branch is to succeed.

Three components needed for good staff relations are:

Feedback - The informal, two-way communication between staff and management; visible managers available to staff; and, staff input into planning and decision-making.

Assessment - Informal progress assessment by management of staff's work; informal recognition of and credit for staff achievements; and tangible results/rewards for performance.

Evaluation - Regular, format documented performance appraisals for each number of staff.

A commitment to the principles of Feedback/Assessment/Evaluation will be encouraged as a fundamentally important responsibility for all staff in management positions. Line staff will be encouraged to provide constructive input into planning and decision-making.
(See Detailed Strategic Actions, Part IV, Page 127.)

C.4 RETAINING STAFF EXPERTISE/ SUCCESSION PLANNING

WRB will undertake contingency planning to ensure that skills and knowledge critical to the Branch's operations are maintained.

The knowledge and skills of staff are fundamental to the efficiency and effectiveness of all parts of the Water Resources Branch. It is in the Branch's best long-term interest to recognize the importance of maintaining and ultimately passing on these areas of expertise.

Retaining staff expertise and planning for succession will be addressed in several ways. Branch management will create a working environment that will contribute to a reduction in staff turn-over. Management will also develop a system to identify critical skills and individual knowledge bases among Branch staff and employ appropriate mechanisms (e.g., apprenticeships, job rotation, training) to transfer this expertise to other staff so that it is not lost to the Branch. (See Detailed Strategic Actions, Part IV, page 131.)

C.5 ACCOMMODATIONS/FACILITIES

WRB will provide staff with appropriate accommodation and facilities to effectively carry out their work.

Work Place

The Water Resources Branch has grown so quickly over the past few years that the number of staff now far exceed the space available to accommodate them satisfactorily. Refurbishing of the MISA Industrial Section's facilities is an example of an acceptable level and quality of office space that should be provided to all staff. Unfortunately, refurbishing stopped with MISA Industrial, leaving what many staff feel is an entirely inadequate level of accommodation for the majority of the WRB staff. Some groups have tried to improve their surroundings but this can only be done to a limited extent.

Concern has been expressed not only about cramped quarters at 1 St. Clair Avenue West, but also about the poor quality of heating, cooling and ventilation which can cause discomfort and, at times, make working difficult.

Branch Management, recognizing the critical nature of this issue, will initiate appropriate actions to provide all staff with adequate office space, furniture, equipment and an attractive, healthy working environment. Staff will have the responsibility for keeping their work place in an acceptable condition.

When the Branch is in a position to substantially alter the work space, there are many things that can be done to enhance the working environment.

- A lunchroom/coffee room should be provided as a common area for staff to meet informally during the work breaks. Such a facility would help to break down section barriers and improve lines of communication among staff.

- Storage facilities, a loading dock and more meeting rooms, particularly smaller rooms for meetings of three or four people, should be built in to any plans for a new or renovated building.

Branch Facilities and Support Services

The Water Resources Branch will establish and maintain a library that will serve, as a minimum, as a repository for reports written by Branch staff, key reports received from external sources, and journals to which the Branch subscribes.

In addition, the Branch library will be staffed with a trained library technician who will be responsible for maintaining the facility, conducting computer-based information searches and arranging inter-library loans.

The Branch will develop a central filing/computerized document management system for maintaining and making available a comprehensive record of correspondence and other important documents, e.g., Management Committee submissions, Issue Reports, Briefing Notes, etc.

The WRB Management Team will assign staff to evaluating alternative approaches for a Branch library and central filing system. Their recommendations should be presented to Management Team by the end of March 1992, and Management Team should release an action plan shortly thereafter for implementation during fiscal year 1992-93. (See Detailed Strategic Actions, Part IV, page 135.)

PART IV

DETAILED

STRATEGIC ACTIONS

GROUP A

PROGRAM DEVELOPMENT AND PLANNING

A.1 LONG-TERM PLANNING

Importance

Staff inside and outside the Branch commented that the WRB does not seem to have a well-defined mandate nor does it seem to establish comprehensive extended goals or set priorities.

Staff of the Water Resources Branch, as well as representatives from the Regions and other branches participating in focus group sessions, agree that one of the most important things that the WRB must do is take the initiative in providing long-term direction and leadership to the Ministry in the area of water resources management.

Purpose

In the WRB Mission Statement, both the Goal and Actions to achieve the Goal clearly show that the Branch has accepted a wide range of responsibilities for managing Ontario's aquatic environmental resources. Recognizing its responsibility for providing leadership and guidance, the Branch must undertake a comprehensive, long-term planning process to identify and guide our responses to water resource management issues of the 1990's and to provide a basis for annual work plan development.

The WRB will implement a procedure to undertake a comprehensive, coordinated, long-term planning process for water resource management programs. All Branch staff will have the opportunity to contribute to the plan. Senior MOE management, partners and clients in the Regions, other MOE branches, other ministries and other jurisdictions will be consulted in preparing the plan.

The full procedure described here takes a year to complete and will be undertaken every four years. However, the Branch's Long-term Plan will be reviewed in consultation with staff inside and outside the WRB and, if needed, modified each year to accommodate emerging issues.

Current Approach

The Strategic Planning Committee is not aware of any comprehensive, Water Resources Branch-wide, long-term program planning initiatives.

Over the past few years, however, there has been some acknowledgement, at the section level, of the need for long-term planning. Where this has been done, it appears to be limited in scope and carried out in an ad hoc mannor within individual WRB sections. However, the results of section level, long-term planning are not well known.

Proposed Approach

The Long-term Planning (LTP) Process is described in eight steps. In addition to the following text, Figure 8 summarizes the process graphically and Figure 9 identifies the proposed planning timeframe.

Figure 8
THE WRB LONG-TERM PLANNING PROCESS

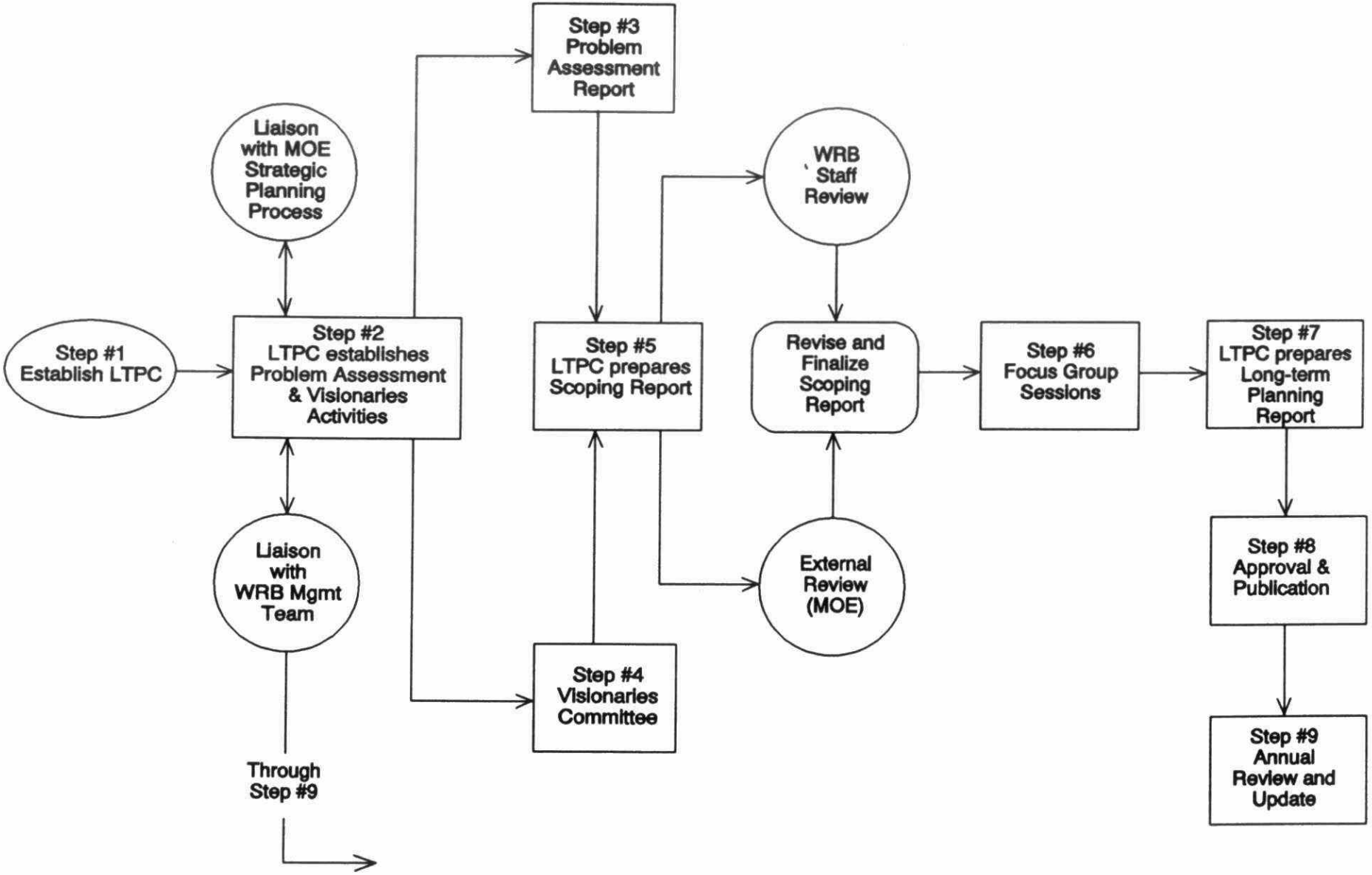
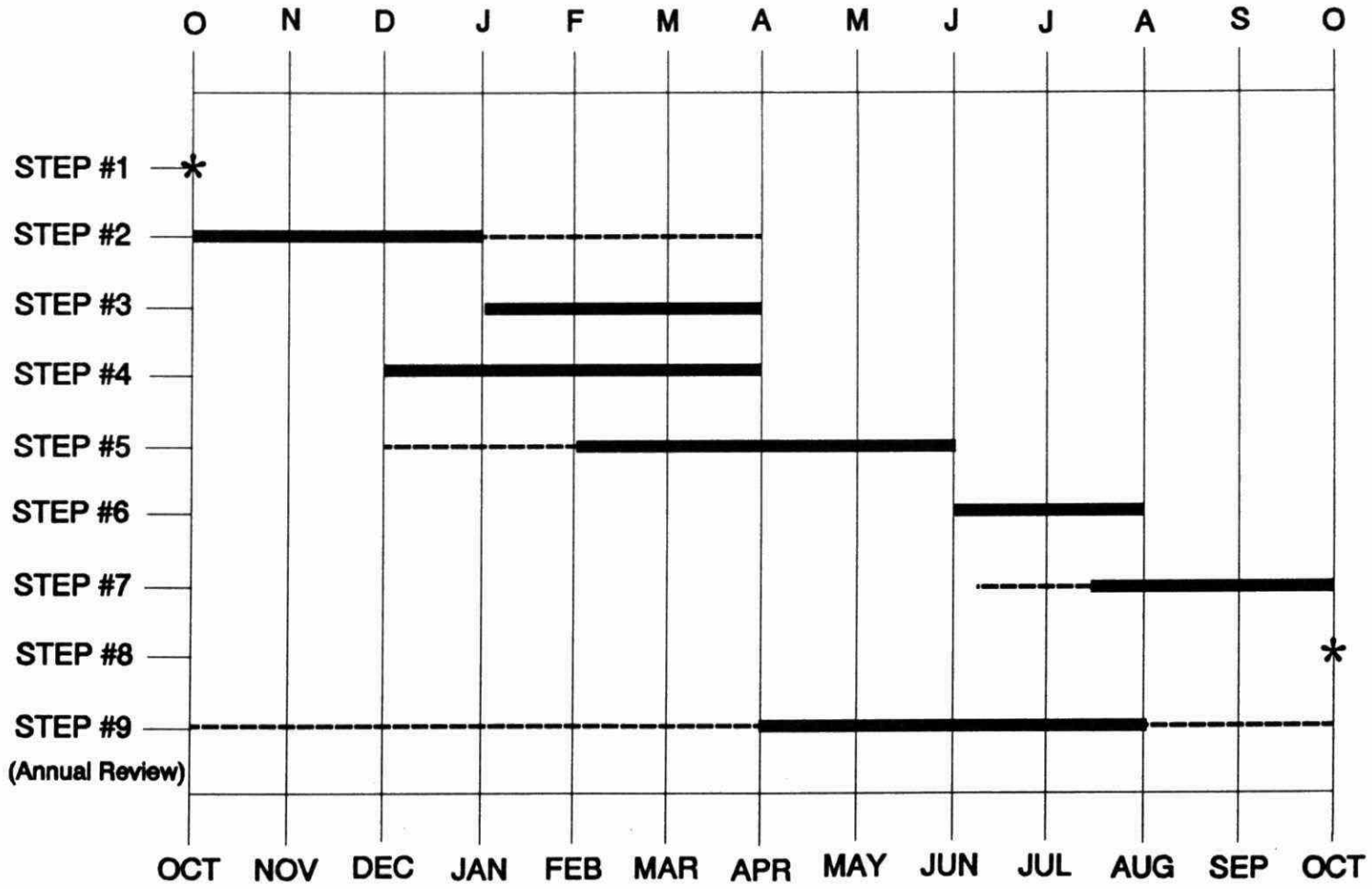


Figure 9

LONG-TERM PLANNING IN THE WRB

TIMETABLE



STEP #1 - Establishing the LTP Committee

The WRB Management Team sets Terms of Reference and appoints a Long-term Planning Committee (LTPC) that is composed of eight supervisors (one from each Section). Supervisors will serve on the Committee on a rotating basis with each member serving for a term no longer than two years.

The LTPC will work closely with WRB Management Team throughout the planning process.

STEP #2 - Organizing the Long-Term Planning Process

In consultation with the WRB Management Team, the Long-term Planning Committee meets to appoint a chair, review the Terms of Reference and set an activity schedule. This committee will manage all aspects of the long-term planning process.

The LTPC, through the Strategic Planning Coordinator, will maintain appropriate ties with the Ministry Strategic Planning Office to ensure consistency and compatibility.

The LTPC writes a Request for Proposals to be used in contracting activities related to the assembly of a comprehensive Problem Assessment Report (See #3). A contractor is selected and the contract is managed by the LTPC.

The LTPC selects candidates from inside and outside the Branch for the "Visionaries Committee" (See #4), sets Terms of Reference for that Committee and seeks Management Team endorsement.

Candidates for the Visionaries Committee are contacted and an initial meeting for that Committee is set. A facilitator is engaged to administer the activities of the Visionaries Committee.

STEP #3 - Problem Assessment Report

This task, likely to be carried out by an external contractor, is a summation of facts related to the aquatic environment. The report will include such information as a relative comparison of pollution source categories (e.g., industrial point sources, STPs, agricultural drainage, etc.); trends in ambient aquatic environmental conditions (e.g., water, biota, etc.); program performance indicators (e.g., effluent compliance reports); emerging issues; and activities in other jurisdictions (e.g., federal agencies, other provinces, U.S. EPA and states).

This report will also review the recent activities of WRB including allocation of resources.

STEP #4 - Visionaries Committee

The purpose of this activity is to draw on the ideas and insights of a number of "lateral thinkers" who work in WRB or in similar fields outside the Branch. These visionaries tend to think well beyond the problems at hand, foreseeing the emergence of major issues and gaps in the Branch's programs. They can often suggest novel approaches to

dealing with the Branch's business. These people normally have many professional contacts outside the Ministry and can, therefore, provide the Branch with insights as to how other jurisdictions, in Canada and internationally, are dealing with aquatic environmental issues.

The Visionaries would meet about three times according to a schedule developed by the LTPC. A facilitator would be engaged to organize the meetings and record the discussions. The Visionaries would provide the LTPC with their recommendations in a written submission and oral presentations. Some of the environmental issues that the Visionaries might discuss were brought forward at the focus group sessions; these are presented on page 51 as "Predicting Environmental Directions".

STEP #5 - Preparing a Scoping Report

The LTPC will assess the factual information provided in the Problem Assessment Report and the less tangible material provided by the Visionaries Committee. They would also meet with appropriate representatives from the corporate strategic planning process, Regions, other branches, other ministries and other jurisdictions, where warranted, to discuss issues of common interest. They would then write a "Scoping Report".

That report would contain a complete listing and evaluation of current aquatic environmental issues and WRB activity areas, related programs and activities in the Regions, other branches and other jurisdictions, trends and emerging problems, perceived program gaps, etc. Based on all of the information collected, the LTPC would prepare their conclusions and draft preliminary recommendations related to long-term planning. The LTPC would work closely with the WRB Management Team throughout this phase of the exercise.

Once approved by Management Team, the Scoping Report would be circulated to all staff in the Branch, senior MOE management and selected staff in the Regions and other branches for review. Written comments would be solicited and any interested staff would be given the opportunity to discuss aspects of the report in detail by participating in focus groups.

STEP #6 - Focus Group Sessions

The Long-Term Planning Committee would organize four focus group sessions open for participation by all staff to discuss and debate aspects of the long-term plans for WRB. Focus group discussions would centre

around major WRB program areas such as: Surveillance and Monitoring, Abatement and Prevention, Research and Technology, Administration, etc.

A fifth Focus Group would also be held for staff of the Regions, other branches and other agencies, giving them the opportunity to discuss components of the Scoping Report.

Members of the LTPC would share the tasks of being discussion leaders and recorders for these focus groups and would prepare reports on each of the focus group sessions for future consideration by LTPC as a whole.

STEP #7 - Drafting the Long-term Planning Report

Based on the results of:

- Problem Assessment Report
- Visionaries' Report
- Staff comments on Scoping Report
- Focus Group sessions, and
- Interviews with Regions, Branches, and other agencies,

the LTPC prepares a draft Long-term Planning Report for the Water Resources Branch. A presentation of the draft report is made to Management Team for their review and approval.

STEP #8 - Publication

The WRB Long-term Planning Report is approved, published and distributed to all WRB staff, senior MOE management, the Regions, other Branches and other agencies, as warranted. The development of the Water Resources Branch's annual work plans is based on the Long-term Plan.

STEP #9 - Review and Updating

The success of the Long-term Planning Process described above depends upon the commitment of time and the dedicated efforts of Branch staff, particularly the supervisors who are members of the LTPC. It is impractical and probably unnecessary to repeat the entire process more frequently than every four years. The Strategic Planning Committee recommends, therefore, that the first, 8-step planning cycle be initiated in October 1991 and carried out every fourth year thereafter.

In the years between carrying out the full process, the WRB Long-term Plan will be reviewed from two perspectives:

- an audit of the Branch's annual programs and projects to ensure that the Long-term Plan is being followed
- the need for changes to the Plan in light of emerging issues or changing priorities

The review would be initiated by the LTPC in consultation with the WRB Management Team each April (beginning in 1993). Through the use of Focus Group sessions, staff of the Branch, senior MOE management, the Regions, other branches as well as other ministries and agencies would be consulted as part of the annual review.

Approved changes to the Long-term Plan should be published by the end of June of each year in time for consideration in the annual program/project planning process.

Benefits of Proposed Approach

- Comprehensive long-term planning becomes a mandatory Branch activity
- Staff are directly involved in the Branch planning process resulting in greater staff commitment
- Planning mechanisms permit early identification of emerging issues
- WRB reinforces its role as leader in setting the water management agenda for Ontario
- Implementation of such comprehensive and open process will result in a better Branch image and improved credibility
- Output from the Problem Assessment Report could provide the basis for a state of the aquatic environment report for the public.

Predicting Environmental Directions

As part of the strategic planning focus group discussions, participants were asked to offer their views on the factors that will likely influence environmental directions and trends for WRB in the 1990's. The most commonly identified issues were:

- Sharing responsibility for environmental protection with other agencies (e.g., MNR, OMAF, MMA)
- Public education, awareness and participation in making decisions about environmental management
- An ecosystem (holistic) approach to managing Ontario's water resources
- Application of the principles of zero discharge/virtual elimination of highly hazardous substances
- Greater emphasis on prevention using regulations to control polluting sources
- Control of diffuse sources of pollution
- Environmental inventories and audits to assess the benefits of control and remediation
- Assessing and protecting ground water resources
- Addressing global issues such as the Greenhouse Effect

Implementation Plan - LONG-TERM PLANNING

	DESCRIPTION	START	FINISH	RESPONSIBILITY	DELIVERABLES
1	Establish Long-Term Planning Committee	Oct. 2/91	Oct. 2/91	Management Team	L.T.P.C.
2	L.T.P.C. Establishes Terms of Reference, Visionaries, Selects Consultant	Oct. 3/91	Dec. 19/91	L.T.P.C.	Terms of Reference, etc.
3	Preparation of Problem Assessment Report	Jan. 2/92	Mar. 31/92	Consultant	Problem Assessment Report
4	Preparation of Visionaries Report	Dec. 2/91	Mar. 31/92	Visionaries Comm.	Visionaries Report
5	Preparation of Scoping Report	Feb. 3/92	May 29/92	L.T.P.C.	Scoping Report
6	Focus Group Sessions	June 1/92	July 31/92	L.T.P.C./Staff	Focus Group Reports
7	Preparation of L.T.P. Report	July 15/92	Sep. 30/92	L.T.P.C.	Draft LTPC Report
8	Publication		Oct. 1/92	Management Team	WRB Long-Term Plan
9	Annual L.T.P. Update	Apr. 1/93	July 30/93	L.T.P.C./Staff	Updated Long-Term Plan

A.2 SHORT-TERM (ANNUAL) PLANNING

Importance

WRB is a project-oriented Branch with over 200 programs and projects prepared for 1991-92.

About 75 percent of the focus groups indicated:

- program planning/priority setting is done poorly in the Branch
- priority setting and planning are critical elements developing successful programs
- a Branch-wide process for program planning and priority setting is needed

Additional workload pressures and ongoing resource constraints will continue to be prominent factors affecting the allocation of resources. It is therefore critical to plan and establish priorities on a Branch-wide basis to ensure the most effective and efficient use is made of available resources.

Purpose

It is necessary to plan programs, set priorities and follow up implementation on a Branch-wide basis for the following purposes:

- Ensure that programs fit in with and meet overall Branch and Ministry short and long-term needs and priorities
- Develop and evaluate programs on the basis of an objective, consistent Branch-wide system, thus reducing the potential for ad-hoc program development
- Ensure that planned work loads are consistent with available resources, in order to minimize work overloads and assist in controlling the disruptive effect of unplanned crises
- Increase accountability at all levels for meeting program goals
- Foster up-front planning
- Facilitate opportunities for program integration and partnerships

Current Approach

Work plans are developed by each section based on the program/project recommendations of project leaders and unit supervisors. Since the final budget allocations are usually not available when the work plan development begins, it is normally assumed that the prior year's allocation is the base available for the upcoming planning cycle.

A number of years ago, the Branch adopted a standard format for reporting program work plans and it, or a modified version, is in use across the Branch. However, priority setting procedures are not consistent throughout the Branch, since program priorities are determined by managers and supervisors at the section level. Historically, section work plans have not been subject to approval by senior Branch management and therefore have become the final section plan by default.

The major problems with the current approach are as follows:

- inconsistent levels of detail from section to section for conducting up-front planning
- lack of consistent priority-setting criteria for reviewing, evaluating and approving proposed programs and projects, and for setting section annual work plans
- no formal procedure for approval of section work plans by senior management to ensure consistency with overall Branch priorities
- no formal procedure for Branch-wide follow-up to ensure accountability for spending of program budget, meeting program schedules and producing deliverables

Proposed Approach

Establish a Branch-wide program planning process based on the following major components (shown on Figure 10):

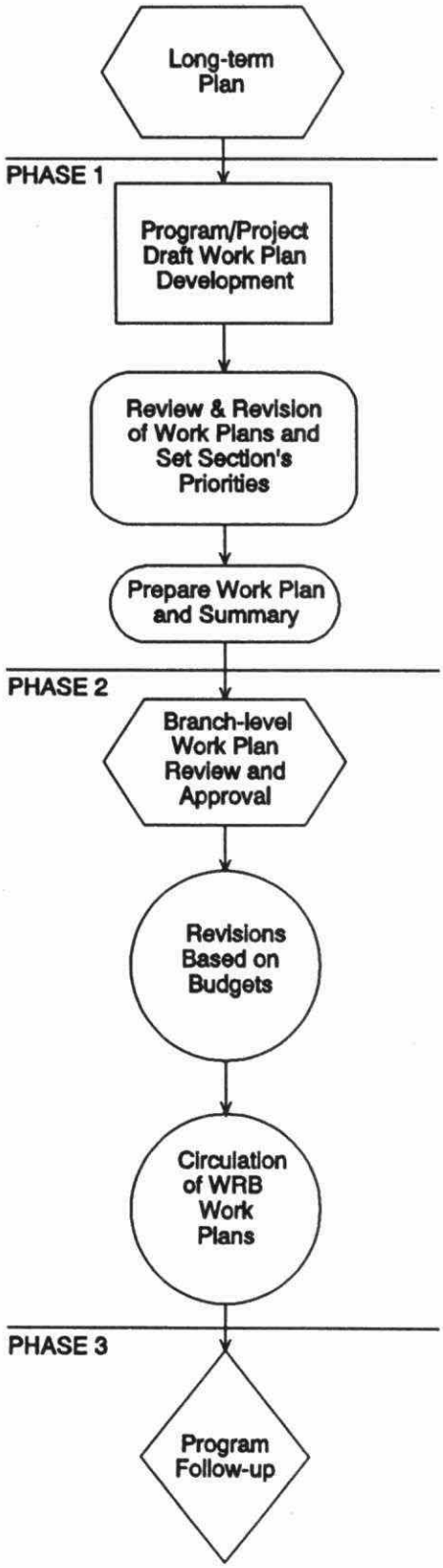
- annual work plans are to be based on WRB long-term directions
- program review criteria and priority assessment at the section level
- senior Branch management evaluation and approval of work plans
- follow-up to assess work plan performance at the Section and, in the case of major problems, Branch level

Short-Term (Annual) Planning Process

<u>Work Plans</u> (Phase 1)

1. Using the WRB long-term plan as a guideline, each project leader completes program work plan(s) and submits them to the unit supervisor. See Attachment #1, for an example of a work plan.
2. Individual work plans are reviewed for consistency with the long-term plan and signed off by the supervisor and the manager.

Figure 10
SHORT-TERM (ANNUAL) PROGRAM PLANNING



PARTICIPANTS	ACTION
Program/Project leaders and staff	Develop draft program/ project work plans (in line with the long-term Branch directions).
Section Managers & Supervisors	Review each of the Section's draft work plans for consistency, applicability and completeness. Identify the Section's priority programs and projects for the coming year.
Section Managers & Supervisors	Prepare the Section's proposed Work Plan for the coming year and draft a Work Plan Summary.
WRB Management Team	Review and approve each Section's Work Plan for consistency with the WRB long-term plans.
Section Managers & Supervisors	Bring work plans in line with actual budget.
WRB Management Team	Distribute final Work Plan Summary to all WRB staff, clients and partners. A complete set of WRB work plans are provided to each manager, regions and appropriate branches.
Section Managers, Supervisors, Project Leaders	Regularly monitor the progress of activities and address problems appropriately. Report program status periodically to Mmgt. Team, identifying problems and plans for resolution.

3. Supervisors are responsible for ensuring that sub-components of larger programs are combined to avoid the isolated listing of many small projects that are, in many cases, tied to larger undertakings. As a target, program units should have a minimum of at least **1 full person-year.**

4. The manager and supervisors identify Section priority programs for the upcoming year and based on the previous year's level of funding, finalize the proposed Section work plan (see page 67 for Guidance on Setting Program/Project Priorities).

Management Team Approval (Phase 2)

5. The proposed Section Work Plan Summary is submitted to Management Team for review and approval. Attachment #2 explains the submission requirements for Management Team approval and provides an example of a Work Plan Summary. Management Team approves Section work plans.

6. When the actual budget becomes available work plans may need to be revised.

7. Approved work plan summaries will be distributed to all staff, regions and other appropriate external stakeholders. Full Section work plans will be provided by each Section to each of the other Sections, the Director and the Assistant Director.

Follow-up (Phase 3)

8. Managers and supervisors periodically review all of their group's work plans to ensure that the schedules are being maintained and milestones met.

9. Managers report quarterly to Management Team on the status of programs not performing as planned and provide alternatives and solutions. Decisions regarding modifications or terminations to programs or projects with major problems are made by Management Team. Funding could be re-allocated to other projects.

Benefits of Proposed Approach

- Consistent procedure for work plan development
- Requires input from Management Team, thereby introducing a wider perspective on setting priorities and selecting programs
- Provides consistent criteria for program development and evaluation
- Encourages up-front program planning
- Follow-up of individual work plans to ensure they align with the Long-Term Plan

Implementation Plan - SHORT-TERM PLANNING

	DESCRIPTION	START	FINISH	RESPONSIBILITY	DELIVERABLES
1	Prepare draft individual Work Plans	Sep. 3/91	Jan. 15/92	Proj. Leaders (Pr.L.)	Project Work Plans
2	Section review and approval of Work Plans	Jan. 2/92	Jan. 31/92	Sect. Mgrs/Suprvs.	Section Work Plan
3	Prepare Section Work Plan summaries	Feb. 3/92	Feb. 17/92	Section	Section Work Plan Summaries
4	Branch Work Plan review and approval*	Feb. 26/92	Feb. 28/92	Management Team	Branch Work Plan
5	Circulation of Work Plan Summaries	Mar. 2/92	Mar. 16/92	Management Team	
6	Revise Work Plans based on Budgets (actual time frame may vary)	Apr. 1/92	Apr. 30/92	Section	Amended Branch Work Plan
7	Program follow-up/quarterly reporting	Apr. 1/92	Mar. 30/93	Mgrs./Suprvs./Pr. L.	Progress reports

* 3 day Management Team retreat

ATTACHMENT #1

EXAMPLE WORK PLAN FORMAT

WORK PLANS 1991-92

Program* Number: *DO-1 (Section Code + sequential number)*

Section:

Program Category:

AP		**Sub:**	*DM*	
GA	*X*		*PCS*	*X*
RT			*POL*	
SM			*SCI*	

(See Work Plan Definitions: Section Code, Program Category, Sub-Category, pages 68-72)

Program Title: *Water Resources Branch Strategic Plan*

Program Leader: *J. Ralston (Chair)*

Program Rationale

Background

WRB is a complex, project-oriented Branch of about 220 people, probably working effectively as sections and units but without an effective Branch-wide planning process which results in a lack of leadership and direction for the Ministry in the area of water resources management.

This is clearly not in line with the WRB mission statement which states that WRB plays a major role in managing the Province's water resources.

***Note: The term "Project" can be substituted, where applicable, throughout this form.**

Purpose

To develop a strategic planning process for WRB that will provide a practical framework for Branch program planning (long and short term), priority setting, fostering teambuilding, managing human resources and developing effective internal and external communications.

NOTE: The purpose statement must include a description of the following points:

- ***Why the program is being done***
- ***What issue is addressed by this program***
- ***How the program relates to the Branch Mission Statement***

Program Description

The Strategic Planning Committee will develop a strategic plan for the WRB composed of a series of strategic actions (e.g., program planning) and associated implementation plans (e.g., annual work plan development) that are based, principally, upon advice from WRB staff.

Information will be obtained through:

- *Analysis of current project-specific work plans*
- *A series of focus group sessions with Branch staff and representatives from regions and other Branches. Topics will include program development and directions, external relations, research and technology and the working environment.*
- *Routine consultation with WRB Management Team*
- *Seminars, section meetings and other similar opportunities to discuss functions and responsibilities*

The completed draft plan will be presented to and discussed with all staff at a Branch meeting in mid-1991.

NOTE: The program description must address what specifically will be carried out and how information will be obtained.

Program Schedule

> ***NOTE:*** ***The Program Schedule includes a listing of project activities, start and end dates, and milestones. See Form 1.***

Program Clients

Director of WRB
WRB Management Team
WRB Staff

> ***NOTE:*** ***Please be as specific as possible in identifying program clients.***

Product

Report containing a series of Strategic Actions for improving the efficiency and effectiveness of the Branch

> ***NOTE:*** ***Provide a concise description of the product or service that will result from this project.***

Client's Use of Product and Benefits Derived

The strategic plan will be implemented by the Director and Management Team to achieve the variety of benefits related to program planning, more effective communications and improved human resources management.

Environmental Benefits

- *Long-term water resource management planning*
- *More focused program directions*
- *More efficient/effective use of staff and resources*

> ***NOTE: Client's use of product must address what will be done with the product, and identify the environmental benefits.***

Communications Plan

- *All staff will be kept aware of activities through a series of strategic planning newsletters published throughout the duration of the program.*
- *Focus group sessions open to all WRB staff will be held.*
- *The input of Regions and other Branches will be achieved through focus group sessions held for them.*
- *Management Team will be briefed throughout the program.*
- *Draft final WRB strategic plan will be distributed to and discussed with staff at Branch meetings.*

> ***NOTE: This part of the work plan must identify how communication will be carried out/maintained with project partners, clients, reviewers, management, public, at all stages of the project.***

Program Contingency Plans

- *If focus groups evoke little interest, conduct in-depth interviews with key staff inside and outside WRB*
- *If staff indicate strong opposition to key components of final draft, the Strategic Planning Committee would re-evaluate baseline information looking for alternative directions.*

NOTE: Describe any elements which may delay or alter the project and methods proposed to deal with these.

Lab Load Estimates (# of samples required)

WQ: **OTC:**
DWO: **ITC:**
Other Lab Support Required:

Allocation of Program Resources to MBR Projects

MBR Project Number	*Allocation*	
	Total ODOE	*Total PY*
	9K	*2.8*

NOTE: A breakdown of the budget and staff resources are to be entered on Form 2.

Sign Off

Project Leader:_____ **Supervisor:**_____

Manager:_____ **Date:** _____

Attachments:

Program Schedule
Program Budget
Program Staff Allocation

FORM 1

PROGRAM SCHEDULE

PROJECT TITLE: WATER RESOURCES BRANCH STRATEGIC PLAN			
PROJECT ACTIVITIES	**START DATE**	**END DATE**	**MILESTONES**
1. Solicit project activities form from all sections	Sept./90	Oct. /90	Complete package of 1991–1992 project plans
2. Organize WRB focus groups	Oct. /90	Feb. /91	Completion of 30 Focus Group sessions with staff
3. Organize FG sessions for Branches & Regions	Dec. /90	Feb. /91	FG sessions with external staff
4. Strategic Plan Framework	Jan. /91	Mar. /91	Presentation to WRB Mgmt. Team
5. Draft Final Strategic Plan	Apr. /91	Jun. /91	Presentation to all staff
6. Prepare Final Strategic Plan	Jun. /91	Aug. /91	WRB Strategic Plan

FORM 2

PROJECT RESOURCE REQUIREMENTS

PROGRAM BUDGET(000)		
CATEGORY	BUDGET AMOUNT	BUDGET CODE
SALARY		
CLASSIFIED	107.0	
UNCLASSIFIED		
SALARY TOTAL	107.0	
ODOE		
TRANSPOR. & COMM.	1.0	
MAJOR EXPENSES		
SERVICES & RENTALS	6.0	
MAJOR EXPENSES		
SUPPLIES	2.0	
MAJOR EXPENSES		
ODOE TOTAL	9.0	
GRAND TOTAL	116.0	

STAFF RESOURCES	
LIST OF PROGRAM STAFF	PERSON-YEARS
H. Selles	0.5
J. Ralston	0.4
J. Stager	0.4
M. Tanaszi	0.5
All WRB staff: Focus Groups	1.0
TOTAL	2.8

WORK PLAN DEFINITIONS

Section Code

All sections will assign program numbers to work plan programs consisting of a section code and a sequential number. The section identifiers are shown below:

DO - Director's Office
DW - Drinking Water
GL - Great Lakes
LI - Limnology
MI - Misa Industrial
MM - Misa Municipal
MO - Misa Office
MS - Management Services & Technical Consulting
WM - Watershed Management

Program Category

Abatement and Prevention (AP) - the development of measures to eliminate pollutants from industrial and municipal effluents and urban and rural diffuse sources, including measures such as regulations, management plans and strategies, objectives and guidelines, policies and supporting investigations

Surveillance and Monitoring (SM) - a scientifically designed system of ongoing measurements and observations carried out to:

- assess compliance with discharge control requirements
- determine achievement with respect to aquatic environmental objectives
- evaluate ambient water quality conditions and trends
- identify emerging water quality problems

Research and Technology (RT) - the development and application of advanced scientific knowledge and evaluation of technology to resolve issues, e.g.,

- development of control technologies to treat sewage, control sewer overflows or improve drinking water treatment
- development of models to determine the effect of acid deposition on lake chemistry, develop fate and transport models or investigate physical processes affecting pollutants
- development of laboratory or field techniques to identify the presence and effects of toxic substances in water, effluents, biota and sediments

General Administration (GA) - the support structure that exists for the development and delivery of all Branch-wide programs, specifically the activities of the Management Services and Technical Consulting Section

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Sub-Category

Policy (POL) - a plan of action for managing an environmental problem, e.g., guidelines and objectives, standards and advisories, regulations and management plans, etc.

Science (SCI) - systematic investigations and application of scientific/engineering principles to assess environmental impacts, processes and conditions as well as studies to develop new or improve existing environmental technologies and detection methods

Data Management (DM) - the development and implementation of systems to support the storage, retrieval, compilation, statistical analysis, interpretation and reporting of data generated by WRB activities

Program Coordination and Support (PCS) - activities carried out to provide section-wide and program-specific planning, coordination, administration, communications and contract liaison

GUIDANCE ON SETTING PROGRAM/PROJECT PRIORITIES

Factors

The following factors should be addressed in developing a program work plan proposal. Managers and supervisors can use these criteria for determining whether minimum work plan requirements have been met, and for evaluating and rating the relative priority of programs/projects generated in a section.

- Mission Statement
- Environmental Benefits
- Clients
- Products
- Use of Products
- Schedules/Milestones
- Contingency Plans

ATTACHMENT #2

MANAGEMENT TEAM APPROVAL OF WORK PLANS

Under the proposed approach to short-term planning, Sections will be required to obtain approval of draft annual work plans from Management Team. The submission will consist of two components: a copy of the entire work plan, and a summary based on a pre-set form (Form 3). A presentation will also be required outlining the highlights of the proposed work plan, identifying anticipated difficulties and possible opportunities for partnerships.

Program Summary Form

Section - identified on each form

Program Category - classify programs by the program categories of Abatement and Prevention, Surveillance and Monitoring, Research and Technology and General Administration, and enter on the top line on the form

Program Number - corresponds to assigned program number on work plan, e.g., the first listed program of the Director's Office would be DO-1

Program Title - corresponds to work plan program title

Sub-Category - identify as per definitions

Program Description - develop a very brief (keyword) description of the program

Total ODOE/Total PY - enter as per work plan

Product - enter appropriate code(s) from the WRB product code list

Client - enter appropriate code(s) from the WRB client code list

NOTE: ***Form 3 is the Work Plan Summary Format. Each Section prepares a summary form for each category of program, e.g., Surveillance and Monitoring, and lists all of the proposed activities within it.***

FORM 3

WORK PLAN SUMMARY

SECTION: DIRECTOR'S OFFICE PROGRAM CATEGORY: GENERAL ADMINISTRATION							
NO.	SUB-CAT	PROGRAM TITLE	PROGRAM DESCRIPTION(KEYWORDS)	ODOE	P-Y	PRODUCT	CLIENT
D01	POL	Water Resources Branch Strategic Planning	Develop a strategic planning process for the Branch	9.0	2.8	12C	DO

CODES FOR SUMMARY FORM

PRODUCT CODES

1. Administrative support
   - A. Financial
   - B. Human Resources Management
   - C. Clerical/Office
2. Computer program(s)
3. Databases
4. Data and information management systems
5. Demonstration project
6. Design/guidance manual
7. Enforcement support
8. Expert systems
9. General audience publications (e.g., Sport Fish Guide)
10. IJC reports, e.g.,
    - A. RAP documents
    - B. COA reports
    - C. WRB reports
    - D. Other IJC submissions
11. Models
12. Planning
    - A. Long-term
    - B. Program/project
    - C. Strategic
13. Seminars/workshops/courses
14. Scientific publications (e.g., journals/conference papers)
15. Technical developments
16. Technical reports, e.g.,
    - A. Greenback
    - B. Program series (e.g., MISA Development Docs./DWSP Plant Reports)
    - C. Data reports (file or published)
    - D. Other
17. Program progress reports (internal)
18. Water management instruments, e.g.,
    - A. Guidelines/objectives
    - B. Management plans/strategies
    - C. Policies
    - D. Regulations
    - E. Other
19. Other

CLIENT CODES

WRB

DO - Director's Office
DW - Drinking Water
GL - Great Lakes
LI - Limnology

MI - Misa Industrial
MM - Misa Municipal
MO - Misa Office
MS - Management Services
WM - Watershed Management
WRB- All

Regions

SW - Southwest
WC - West-Central
C - Central
SE - Southeast
NE - Northeast
NW - Northwest
REG- All

Branches

ARB - Air Resources Branch
AB - Approvals Branch
AP - Apios
CB - Communications Branch
EAB - Environmental Assessment Branch
HCB - Hazardous Contaminants Branch
IEB - Investigations and Enforcement Branch
LAB - Laboratory Services Branch
LSB - Legal Services Branch
LPB - Landuse Planning Branch
MO - Minister's Office
PPB - Policy and Planning Branch
PEB - Project Engineering Branch
RTB - Research and Technology Branch
SITB- Systems Information and Technology Branch
SAC - Spills Action Centre
WMB - Waste Management Branch
MOE - All
MOEO- Other

Provincial Government

MNR - Ministry of Natural Resources
MMA - Ministry of Municipal Affairs
OMAF- Ontario Ministry of Agriculture and Food
GOO - Other

Federal Government

EC - Environment Canada
DFO - Fisheries and Oceans
HW - Health and Welfare
FEDO- Other

Municipal

MUN - Municipalities
MUNO- Other

Industry

1. Petroleum Refining
2. Organic Chemical Manufacturing
3. Iron and Steel
4. Inorganic Chemical
5. Pulp and Paper
6. Metal Mining
7. Metal Casting
8. Electric Power Generation
9. Industrial Minerals
10. All
11. Other

NGO - Non-governmental organizations including public interest groups
UC - Universities and Colleges
CON - Consultants

International Agencies

EPA - U.S. Environmental Protection Agency
IJC - International Joint Commission
O - Other

A.3 PROGRAM INTEGRATION

Importance

Water Resources Branch conducts many programs of varying scope and complexity. These programs cover a broad range of activities, from surveillance and monitoring, to research, to regulation and policy development, etc. At present, the Branch carries out over 200 projects within its program framework.

Virtually all focus groups expressed concern about a lack of program integration, which they saw as a serious shortcoming in the way the Branch conducts its business. The result can be fragmentated program development and direction, poor resource use, slow progress, redundancy or duplication and a general dissipation of effort and effectiveness.

Purpose

An overall commitment to integrating programs, or common aspects of programs, could improve Branch effectiveness in a number of ways:

- programs are developed and delivered within a common framework and vision, focusing progress toward program targets
- optimum use is made of available funds and resources
- inter-sectional cooperation is fostered, enhancing understanding of common areas of effort

Current Approach

Branch staff, generally, have poor knowledge of the wide range of current Branch programs, and their scope, type and features. Section programs are developed more as a reflection of section priorities than as part of overall Branch priorities. Thus, there is little evidence of cooperative efforts among sections and instead, a sense of section "ownership" of programs. This situation is not unusual in the absence of a clear sense of long-term Branch program directions.

There is also the risk of inconsistent relationships being developed by various sections or program staff with common external stakeholders, which can confuse roles and reduce Branch credibility.

Proposed Approach

Undertake a process of integrating program activities where feasible, appropriate and beneficial, in conjunction with developing a vision of overall Branch program direction.

This process can be undertaken in 3 key areas:

- **General Program Integration**
- **Partnership Integration**

General Program Integration

- Undertake a long-term planning process for the Branch to determine aggregate areas of focus for Branch programs. (See Strategic Action on Long-Term Planning)

- Staff involved in similar categories (i.e., Research, Surveillance, etc.) carry out focus group sessions to discuss the scoping report in anticipation of the development of the overall Branch long-range plan. (See Long-Term Planning Strategic Action flowchart, 4-year cycle/Step #6 and Annual Review and Update, Step #9.)

- It may be appropriate at a later stage, to develop a matrix management (inter-sectional) approach to delivery of a short-term, well-defined program, pooling the efforts of staff in several sections.

- In accordance with the program planning process (see Short-Term (Annual) Program Planning Strategic Action), all work plans are summarized and arranged in appropriate categories, i.e., Surveillance and Monitoring, Research and Technology, so as to be in the form of a Branch overview for Management Team approval.

- Management Team assesses this overview of Branch programs, by category, for consistency with the Branch Long-Term Plan and for possibilities for further integration.

- The annual program overview is distributed to WRB, senior MOE management and regional staff, and other appropriate branches, so that they are aware of current year plans.

- Major Branch programs are conducted according to an established project management approach. (See Project Management Strategic Action) These procedures include monthly update meetings of the Director with program managers of major programs (i.e., MISA Industrial and Municipal, RAPs, etc.), enabling these individuals to discuss problem areas, better integrate their programs and keep other program managers aware of program status.

- Staff in similar categories (i.e., research scientists, regulation developers, etc.) conduct seminars twice a year to discuss category status and topics relevant to the category. A group of appropriate category staff would be identified by the Strategic Planning Coordinator for organizing these events.

- Regular Branch newsletters will inform staff of the status of programs in various categories such as research, abatement, etc., to further promote a sense of program integration. Common areas such as lunch/coffee rooms will stimulate informal integration.

Partnership Integration

- External stakeholders should be invited to take part in the long-term planning process for the Branch. (See Long-Term Planning Strategic Action)
- Appropriate external stakeholders should also be consulted during the development of section work plans.
- A WRB-Regional liaison process should be established to address broad issues of mutual concern. The Assistant Director or a designate will undertake to organize meetings, on at least an annual basis, but more frequently if needed, between appropriate staff in the Water Resources Branch and the regions, and other appropriate branches and agencies. The agendas and specific participants for such meetings would depend upon the issues that each party wished to discuss, e.g., emerging environmental issues, partnerships, conflicts, etc.

  The Assistant Director's responsibilities would include contacting his/her counterpart in each region at least quarterly to identify areas requiring discussion, and establishing a mutually agreeable date, location and list of participants. The Assistant Director would attend and chair those meetings and subsequently track the action items that arose from each meeting and report back to the WRB Management Team.

Benefits of Proposed Approach

- Promotes a sense of teamwork in the development and delivery of Branch programs
- Fosters a sense of a Branch vision with respect to programs in addition to a section vision
- Gives Branch staff a clear idea of Branch programs for a given fiscal year, and how they tie in with each other
- Facilitates the development of innovative and comprehensive program directions, e.g., ecosystem approach and state of the environment reporting
- Promotes consistency in the development of Branch programs
- Enables a greater Branch management role in overall program direction

Implementation Plan - PROGRAM INTEGRATION

	DESCRIPTION	START	FINISH	RESPONSIBILITY	DELIVERABLES
	<u>General Program Integration</u>				
1	Identify Seminar Categories	Apr. 1/92	Apr. 30/92	Strategic Plan. Coord.	Seminar Category Listings
2	Develop Generic Seminar Agendas	Apr. 1/92	Apr. 30/92	Strategic Plan. Coord.	General Seminar Agendas
3	Category groups Develop Specific Agendas	May 1/92	June 30/92	Category Groups	Seminar Specific Agendas
4	Semi-Annual Seminars	June 1/92		Category Groups	Seminars
	<u>Partnership Integration</u>				
5	Liaison Process Established (T. of Ref. etc.)	Oct. 1/91	Jan. 31/92	Asst. Director	Terms of Reference
6	Organization of First Annual Meeting	Feb. 3/92	Mar. 13/92	Asst. Director	WRB/Reg./Branch Meeting
7	First Annual Meeting Held	Mar. 16/92	Mar. 16/92	Asst. Director	Identification of Action Items
8	Follow-up	Mar. 16/92	Oct. 1/92	Asst. Director	Resolution of Action Items

A.4 INFORMATION SYSTEMS PLANNING

Importance

The Water Resources Branch, with over 200 programs and projects on-going annually, generates very large volumes of data and information. Efficient processing of this material is essential for the effective delivery of programs. Concern about the need for efficient information management and data integration was raised by virtually every focus group. Arguably, this is one of the greatest challenges facing the Water Resources Branch today.

Proposed Approach

An overall commitment to the management of information systems will benefit the Branch in many ways by:

- stimulating the creative use of information technology
- ensuring and facilitating the integration of existing and future data bases
- increasing accessibility to data and understanding of information
- establishing priorities and timeframes for the development of information systems

Current Approach

At present, there are a number of information systems that have been designed to supply specific scientific, technical and financial information for Branch programs. However, there has been a definite lack of integration in the development and management of these systems. Such fragmentation of effort has some serious implications for program effectiveness and Branch credibility.

Proposed Approach

The Branch will develop and implement a comprehensive Information Systems Plan that stimulates both the creative use of information technology and an integrated approach to information management.

The Plan will evolve as follows:

- WRB Management Team establishes an Information Systems Project Team of no more than eight people, composed of in-house systems specialists, database manager and users. The chairperson of this Team will be selected by Management Team. The Information Systems Project Team will be supported by an external consultant who will act as a facilitator, provide technical expertise and train the Team in appropriate aspects of information systems planning. SITB and other appropriate stakeholders will be involved in the development of the Plan.

- The Information Systems Project Team will establish their terms of reference and develop a detailed schedule outlining the scope and direction of the project. Management Team will review and approve the plans.

- Currently-employed information processes will be identified and evaluated, and will include: hardware, software, information processing procedures, electronic communications and systems staff organization.

- Available information technologies will be assessed to determine how they might be employed to improve efficiency and effectiveness in the management and delivery of WRB programs.

- Drawing from the inventory of current information processes, the existing databases will be evaluated from the perspective of potential for integration.

- Staff focus groups will be established by the Information Systems Project Team to:

  - identify Branch information systems needs
  - evaluate data integration scenarios
  - discuss available technologies to determine those most appropriate for WRB applications
  - discuss staff organizations to deliver the plan

- The Information Systems Project Team will develop a comprehensive and staged WRB Information Systems Plan that will identify the direction for information processing for WRB. Included will be a data integration component with a data dictionary to direct the automation and distribution of information, e.g., consistent data definition, glossary of terms, common operating procedures for database generation. Data integration will ensure the migration of existing data processing systems to a shared environment.

- The Information Systems Project Team, working in close cooperation with the WRB Management Team, will oversee the implementation of the plan.

Benefits of Proposed Approach

- Increased efficiency in data management and delivery of programs
- Wider use of data bases
- Improved integration of programs
- More consistency and improved efficiency in planning and operating data collection programs
- Better opportunity to apply innovations in information systems procedures

Implementation Plan - INFORMATION SYSTEMS PLANNING

	DESCRIPTION	START	FINISH	RESPONSIBILITY	DELIVERABLES
1	Appoint Project Team	Jan. 2/92	Jan. 2/92	WRB Mgmt. Team	Set Project Team
2	Set Terms of Reference & Plans	Jan. 3/92	Mar. 31/92	Project Team	Project Plans
3	Hire Consultant	Apr. 1/92	Apr. 30/92	Project Team	Contract
4	Analyze Existing Procedures	May 1/92	July 31/92	Consultant/Team	Report
5	Evaluate Available Technology	June 15/92	Sep. 15/92	Consultant/Team	Report
6	Prepare Interim Info. Systems Report	Aug. 14/92	Sep. 24/92	Project Team	Report
7	Staff Focus Groups	Oct. 1/92	Oct. 30/92	Project Team	Discussion Summary
8	Develop Plan	Nov. 2/92	Dec. 31/92	Project Team/Consult.	Draft Plan
9	Approval of Plan	Jan. 2/93	Jan. 15/93	WRB Mgmt. Team	Final Plan
10	Implementation	Apr. 1/93		Project Team	

A.5 PROJECT MANAGEMENT

Importance

WRB is very project oriented. Its many programs and projects vary from small, short-term ones to large, extremely complicated undertakings such as MISA and RAPs.

The focus groups raised concerns about an inadequate level of project management* in the Branch; projects could be better managed, with less confusion and more timely delivery. They suggested WRB undertake training for staff in the principles and applications of project management. They also advocated more up-front planning in program development and delivery, and the use of project teams for the delivery of major Branch programs.

At a time when the Branch must effectively deliver high profile programs for which considerable expectation has been created, e.g., MISA, RAPs, deliver also a whole range of other important programs, and do so under increasing resource contraints, the value to the Branch of incorporating project management practices is greater than ever.

Definition

Project Management is a set of procedures for the planning, organizing, directing and controlling of organization resources (i.e., money, materials, time and people) over a well-defined timeframe in order to accomplish specific goals and objectives.

Purpose

Project management can be an extremely useful tool to help improve Branch effectiveness in the delivery of its programs. The Branch should incorporate such procedures into the management of programs to realize improved effectiveness from the following elements of project management:

- clearly identify project scope and deliverables
- identify project teams with designated project leaders to deliver given programs
- identify project responsibilities for project team members and other stakeholders/partners
- ensure project schedules are developed and maintained by the project team
- report project status on an ongoing basis to project stakeholders
- address problems and ongoing requirements on a regular basis throughout the life of the project

*Note: The term "project management" includes Branch programs and projects.

Current Approach

Project management is inconsistently applied across the Branch, ranging from high-level, formalized procedures to mininal efforts in systematic management of projects.

This inconsistency reduces the potential for program effectiveness. Most Branch programs are technically sound and well respected by the scientific community. But all are not as well managed as they could be, largely because few staff have any formal training in the use of project management techniques for effective program delivery.

Also, the roles and responsibilities for project leaders and project managers are generally not well defined, so that accountability for delivery of programs is necessarily limited.

In the absence of sound project management procedures, a variety of external influences (changing political agendas, unforeseen crises, etc.), have been able to divert priority from being given to timely program delivery.

Proposed Approach

Incorporate formal project management practices, based on a set of consistent procedures, in all Branch programs for which these are suitable. A particular set of procedures is proposed for each of two levels of projects in the Branch:

- **Complex Projects: manpower intensive, multi-agency, normally longer timeframes, large costs (MISA, RAPs)**
- **Easily-managed Projects: limited resource requirements, localized, Branch-driven, normally shorter timeframe, minimal costs (most Branch programs)**

All these procedures are consistent with the elements of the Short-term (Annual) Planning Strategic Action.

<u>Complex Projects</u>

- Designate specific project managers for major Branch programs (i.e., MISA, RAPs, etc). Specific responsibilities of project managers are to include planning and scheduling of program activities, project management and cost control.
- Designate project teams including roles and responsibilities of each member.
- Detailed project schedules are developed by project staff, with assistance provided by the Project Management Unit. These schedules should include activity descriptions and relationships, start and end dates, milestones and responsibilities. These schedules form the basis of the Section annual work plan.

- Project managers should conduct regular (every 2 weeks, for example) progress meetings to assess progress and address problem areas.

- Project schedules are updated as a result of the regular progress meetings.

- Project managers for all major Branch programs should meet, as a group, with the Director, monthly, to discuss progress and problems associated with the project timetables. Management Team is periodically updated.

- Maintain a Branch master schedule for use by Branch management.

- Updated status reports are generated monthly for each major Branch program for project participants, stakeholders and management.

<u>Easily-managed Projects</u>

- Projects are developed by project leaders with unit supervisors to be consistent with Branch priorities and the Branch Long-term Plan.

- A schedule is developed for each project according to the schedule (Form 1) in the Short-term (Annual) Planning Strategic Action, including activities, start and end dates, and milestones.

- Supervisors are to be updated by unit project leaders on the status of unit projects, and are to meet with the Section manager every few weeks to discuss project status and address problem areas.

- Section managers are to maintain an up-to-date status report of section projects and are to be prepared to discuss these at Management Team meetings. Major changes to projects must be brought to the attention of the Management Team.

Support Activities
(Project Management Unit)

The Project Management Unit will provide support services for this initiative in the following ways:

- Assist in defining and implementing project management procedures for the Branch

- Prepare and conduct training sessions on project managment for staff with project management responsibilities. Initially, a 2 to 3-day course would be offered, to include principles and applications of project management and practical training in project management software. A more advanced course in project management software would be offered subsequently.

- Assist section managers and project managers to develop, maintain and report program schedules in a consistent manner
- Assist individual staff members in the management of smaller projects

Benefits of Proposed Approach

- Requires clear definition of goals and objectives of projects
- Encourages better resource use
- Fosters an environment of up-front planning
- Greatly improves chances of delivering products on time and within budget, thereby improving Branch credibility
- Provides training to Branch staff on using project management in program development and delivery
- Provides a basis for an integrated Branch approach to management of Branch programs
- Makes program managers more accountable for their programs
- Modifications and crises can be addressed much more easily in a well-managed project

Implementation Plan - PROJECT MANAGEMENT

	DESCRIPTION	START	FINISH	RESPONSIBILITY	DELIVERABLES
1	Designate PMs and Responsibilities	Oct. 2/91	Oct. 2/91	Management Team	PMs Designated & Terms/Ref.
2	Develop Program Schedules	Oct. 3/91	Feb. 28/92	Project Managers	Detailed Program Schedules
3	Initiate Project Update Meetings w/Director	Jan. 2/92		Director	Update Meetings
4	Develop Branch Master Schedule	Feb. 3/92	Mar. 31/92	Proj. Mgrs/P.M. Unit	WRB Master Project Schedule
5	Prepare P.M. Training Courses	July 2/91	Sep. 30/91	P.M. Unit	P.M. Training Packages
6	Conduct P.M. Training Courses	Oct. 1/91		P.M. Unit	Staff Trained in P.M.

A.6 MANAGING ENVIRONMENTAL CRISES AND OTHER UNSCHEDULED EVENTS

Importance

Environmental crises are intense, unanticipated events such as chemical spills or fires that have the potential to cause environmental damage and may pose health risks. The WRB has a varied and substantial (usually support) role to play in assessing and mitigating such events that impinge upon the aquatic environment. Examples are listed in Table 1.

Most WRB focus groups agreed that, technically, we handle crises well because we deal with so many of them. From the administrative perspective, however, they felt that crises may be poorly handled and, as a result, could severely disrupt normally scheduled activities.

Some staff feel that many crises are given undue importance and disproportionately high priority in relation to regularly scheduled work.

Purpose

A systematic approach for efficiently managing crises is needed in order to expeditiously use Branch resources and expertise, and to minimize disruption to regular work. This requires the Branch to:

- clearly identify the command structure for handling crises within the Branch
- manage crises with a trained, experienced team and preplanned mobilization processes
- evaluate the significance of a crisis and design an appropriate response
- provide the best scientific and technical support in the least time

Current Approach

All sections in WRB are affected by crises. Although some sections may try to build contingency response time into their annual work plans, the extent of response to environmental crises cannot be anticipated and, as a result, normally scheduled work is often affected.

Environmental crises are usually drawn to the attention of WRB by telephone calls from the Regions or other branches. Because WRB is large and its activities very diverse, the wrong group or individual may be contacted. This causes delay in WRB's response and has the potential to result in an inappropriate response. Often several sections within the Branch are drawn into the issue independently and begin to respond in an **ad hoc** fashion.

While the technical responses to environmental crises are usually very good, the potential to over-react, under-react, duplicate responses and waste time is always present because the administrative structure to manage crisis response is not well understood inside or outside the Branch.

The WRB provides a valuable service to the Ministry in dealing with "legal crises" (e.g., providing expert witnesses). Formal arrangements between WRB and I&EB have existed to accommodate requests for staff support but participation in "legal crises" can still disrupt normally scheduled activities.

Proposed Approach

i) Crisis Coordination

The Assistant Director (AD) of the WRB has been identified as the focal point for receiving requests for Branch assistance and has the authority to organize responses to deal with environmental crises. The AD is also the individual to be contacted when assistance is needed to deal with enforcement issues, e.g., provision of expert testimony.

IT IS IMPERATIVE THAT STAFF THROUGHOUT THE MOE ARE MADE AWARE OF THIS PROPER "WINDOW' WHEN REQUESTING ASSISTANCE IN CRISIS SITUATIONS.

The array of responsibilities of the Assistant Director of the Water Resources Branch suggests that this individual will not always be readily available to manage crises responses. It is recommended, therefore, that alternate coordinators be identified to substitute for the AD whenever needed. It is imperative that the alternative coordinator, the Branch Director and the Branch receptionist be advised of this delegation of authority and responsibility each time that the AD is not available.

ii) Training and Planning

The person(s) in the Branch with the responsibility of managing crises must receive appropriate crisis training including: stress management, leadership skills, decision making and public relations.

Crisis Control and Management Pre-plans should be prepared and tested for various crisis scenarios. Mechanisms to rapidly execute and modify pre-plans must also be developed. Staff with practical experience in handling crises should be included. An example of a comprehensive Crisis Management Model is provided in Figure 11. The roles and responsibilities of other groups (e.g., Regions and Spills Action Centre) in handling crises must be understood.

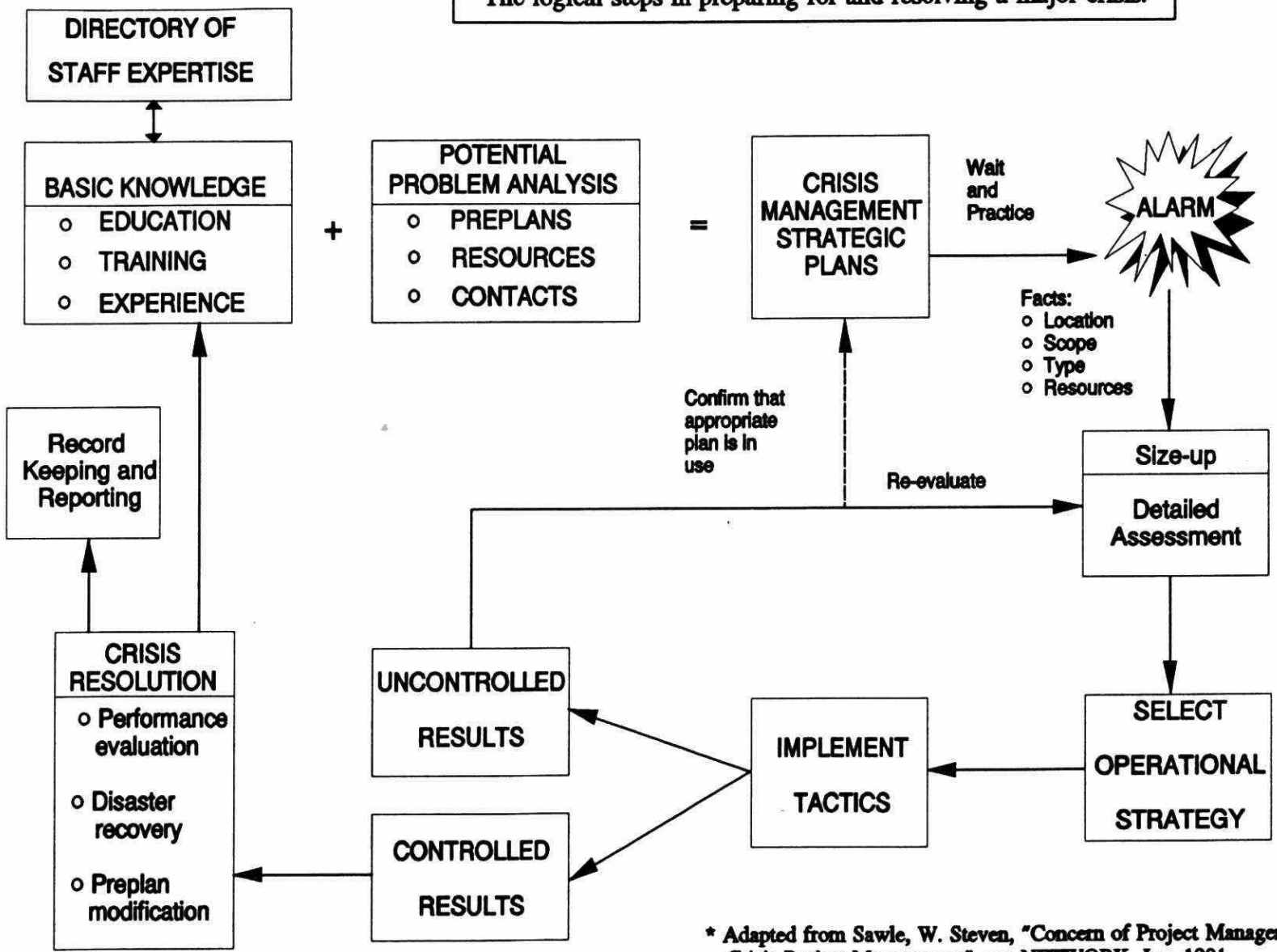
iii) Directory of Staff Expertise

The staff responsible for crisis coordination must be fully aware of WRB staff functions and expertise in order to implement the appropriate tactics with the appropriate personnel.

Figure 11

THE CRISIS CONTROL MODEL *

The logical steps in preparing for and resolving a major crisis.



* Adapted from Sawle, W. Steven, "Concern of Project Managers - Crisis Project Management", pm NETWORK, Jan. 1991

To achieve this, the Assistant Director would be responsible for overseeing the development and maintenance of a "DIRECTORY OF WRB STAFF EXPERTISE".

The Directory would be computerized and accessible to all MOE staff. The continuously updated information base would include brief descriptions of individual staff members' functions, responsibilities, special skills and knowledge. Such information would be located by use of appropriate key words.

iv) Implementation

The Assistant Director or the assigned alternate coordinator would work directly with the section managers or their designates to implement action in response to a crisis situation. If a response required the co-ordinated input of several groups or individuals, the Assistant Director or alternate would appoint a project leader.

v) Record Keeping and Reporting

The Assistant Director would maintain full records of all WRB participation in crises and report semi-annually to the WRB Management Team. In the event of a major involvement such as the Hagersville fire or the Dow Perc spill, the coordinator would report the ongoing status more frequently.

vi) Liaison and Planning

The Assistant Director would establish close working relations with the Ministry's Spills Action Centre, and be fully knowledgeable of its functions and procedures.

The Assistant Director would meet routinely with appropriate staff of I&EB and Legal Services Branch to plan, as early as possible, WRB participation in upcoming cases.

Benefits of Proposed Approach

- The "window" into WRB for assistance would be clearly identified.
- WRB would be more able to provide a well-planned and co-ordinated response.
- There is greater assurance that the proper individuals or groups would be involved.
- The process would result in less disruption of scheduled activities.
- There would be no conflicting or duplicated responses.
- WRB management would always be aware of the status of Branch involvement in a crisis.

Alternatives

WRB's ability to effectively handle environmental crises requires the routine availability and immediate access to the coordinator by the requesting agent (e.g., regional staff or Spills Action Centre). It also requires the dedication of time by the coordinator to establish Crisis Control Pre-plans, the Directory of Staff Expertise, records, etc. This may be more than the Assistant Director should be expected to handle in light of other duties.

As an alternative, a Crisis Coordinator position could be incorporated into WRB. Two options for staffing such a function are:

Option 1 - Establish a permanent position of Crisis Coordinator. This individual would be seen as the permanent "window" into WRB for all crises. (Note: Although Crisis Management is a major function and the Crisis Coordinator would always have to be readily available, it is likely that the Coordinator could assume additional duties such as leading aspects of the planning processes described elsewhere in the WRB Strategic Plan.)

Option 2 - Establish a rotating position of Crisis Coordinator from line staff. Four individuals with several years experience in WRB would be withdrawn from some of their normal functions for three months each year to serve as the "on duty" Crisis Coordinator.

During the first year, when the Directory and Crisis Management Pre-plans are prepared, it is anticipated that all four candidates for the Coordinator function would spend a lot of time in consultation; for the Coordinator "on duty", it would be a full time job implementing these tasks. In subsequent years, the duty would be less time demanding and the individuals, while on duty, would be free to carry out some of their regular functions.

TABLE 1

Examples of types of support provided by WRB during emergency situations:

- Scientific advice and support: Great Lakes, Limnology
- Contaminant assessment, risk assessment, standard setting
- Aquatic and biotic effects
- Data management and GIS support (SPANS, RAISON)
- Monitoring, modelling and impact assessment: dispersion, hydraulic, groundwater, spills, chemical fate and transport
- Drinking water quality assessment (DWSP)
- Expert testimony
- Regulatory and policy advice and support
- Field support: biotic, sediment and aquatic sampling, vessels and equipment

(From Memorandum, J. Ashman to G. Ronan, April 10, 1991)

Implementation Plan - MANAGING ENVIRONMENTAL CRISES AND OTHER UNSCHEDULED EVENTS

	DESCRIPTION	START	FINISH	RESPONSIBILITY	DELIVERABLES
1	Identify Crises Coord./Notify Stakeholders	Oct. 2/91	Oct. 2/91	Management Team	Crises Coordinator
2	Develop Electronic Directory/Staff Expertise	Sep. 3/91	Mar. 16/92	Crises Coord.Consult.	Staff Directory
3	Determine Main Crises Categories	Oct. 3/91	Jan. 31/92	Crises Coordinator	Crises Categories Listing
4	Prepare Crises Mgmt. Pre-Plans	Jan. 2/92	May 29/92	Crises Coordinator	Crises Mgmt. Pre-Plans
5	Semi-Annual Status Report to Mgmt. Team	Apr. 1/92 (Oct.1/91-Apr.1/92) Oct. 1/92 (Apr.2/92-Oct.1/92)		Crises Coordinator	Status Report

A.7 RESEARCH MANAGEMENT

Importance

The Ministry of the Environment, through the Research Advisory Committee (RAC) and the Research and Technology Branch, has a strong and respected system for funding research and the development of technology covering all of the Ministry's areas of activity. The Water Resources Branch has played a lead role in fostering and supporting such research in the past and will continue in an even more expanded role in the 1990s through RAC, the application of funds generated by such activities as the Environmental Technologies Program. Equally important to the Branch's participation in activities to sustain external research is the support for and encouragement of research activities within the Water Resources Branch.

During the winter months about 25% of the Branch staff attended Research and Technology Focus Group sessions. Virtually all of the participants agreed that in-house research was a legitimate and important activity of WRB. Supporting in-house research offered a number of benefits, including:

- attracting and retaining highly qualified staff
- maintaining up-to-date skills and knowledge
- enhancing Branch staff's scientific/engineering image and credibility
- permitting relatively rapid response to undertaking research required in support of WRB programs

Purpose

To ensure the continuation of focused and productive research and technology development through: (i) Coordinated WRB involvement in RAC and the Research and Technology Branch's funding programs; (ii) Coordination, encouragement and support of in-house research (i.e., research projects utilizing Branch staff and financial resources) related to Branch programs and projects.

Current Approach

The Water Resources Branch is one of the most active supporters of the RAC and Research and Technology Branch's programs. Staff serve on committees, coordinate water-related research, evaluate externally-generated research proposals and act as liaison officers for funded projects.

Staff from many sections are also involved with in-house research. Figures for 1991 indicate that approximately 15% of the Branch's Other Direct Operating Expenses (ODOE) and about 20% of its staff resources are committed to research-related activities.

Despite substantial WRB staff involvement in conducting and administering research, the various activities are not formally coordinated to achieve maximum benefits.

Proposed Approach

All aspects of WRB staff involvement in research and the development of technology will be coordinated through the Office of the Assistant Director. Working with the Assistant Director, the WRB coordinators for RAC and for Environmental Technologies will agree to specific strategies designed to encourage the development of externally-funded, water-related research proposals that are in line with aquatic environmental management needs as identified in the WRB Long-Term Plan and reflected in the annual work plans.

In order to take full advantage of the benefits derived from in-house research, the Assistant Director will immediately organize a comprehensive review of current in-house research activities, evaluate the complex and varied suggestions and recommendations from staff gathered during the Strategic Planning Focus Groups on Research and Technology and, in light of the Strategic Actions related to long and short-term planning and integration, develop a plan that will encourage, support and coordinate in-house research and the development of technology.

Implementation Plan - RESEARCH MANAGEMENT

	DESCRIPTION	START	FINISH	RESPONSIBILITY	DELIVERABLES
1	Identify Research Coordinator	Oct. 2/91	Oct. 2/91	Management Team	Research Coordinator
2	Review In-House Research Activities	Oct. 3/91	Jan. 31/92	Research Coordinator	Research Evaluation Report
3	Develop Research Plan	Feb. 3/92	Apr. 30/92	Research Coordinator	WRB Research Mgmt. Plan
4	Implement Research Plan	May 1/92		Research Coordinator	Integrated Branch Research

GROUP B

COMMUNICATIONS - RELATIONS

B.1 DIRECTORY OF STAFF EXPERTISE

Importance

The Water Resources Branch is made up of a complex mix of scientists, engineers, administrators and technical support staff. The range of knowledge, skills and experience is so broad that few people, if any, have a full understanding of the Branch staff's functions and capabilities.

At the Strategic Planning Focus Group sessions, it was almost universally stated that the WRB has highly respected scientific and technical expertise, but many people, most notably those from outside the Branch, expressed concern about readily accessing this expertise, that is, "finding the right expert in the haystack".

Purpose

A wider knowledge of the skills and expertise of WRB staff, both within and outside WRB, is essential to the Branch for developing partnerships, improving communications and efficiently managing environmental crises.

This recommendation (1) identifies a means of developing and maintaining an inventory of skills, knowledge, expertise and experience possessed by WRB staff, and (2) sets out methods to make this inventory easily accessible to people inside and outside the WRB.

Current Approach

The WRB does not maintain a comprehensive register of staff skills and knowledge that is readily accessible to any potential user.

The Government of Ontario KWIC Index To Services, published annually, does provide a broad description of each of the WRB section's functions but it does not identify the responsibilities, knowledge and skills of individuals.

The Branch Receptionist has generated an informal listing, for use at the reception desk, that does list some functions but it is not complete and there is no method for readily updating or expanding the information.

Proposed Approach

A comprehensive computerized inventory of skills and knowledge will be developed and continuously updated in the Water Resources Branch. This inventory will be accessible through computer links.

Because the inventory would be of immediate and continuing use in organizing effective responses to environmental crises, it is recommended that the AD has the responsibility for seeing that the inventory is developed and maintained. (See Managing Environmental Crises and Other Unscheduled Events Strategic Action.)

Information Collection

Each member of staff would be initially responsible for providing information for the inventory related to his/her functions, responsibilities, skills, knowledge and experience. A formatted card has been prepared for distribution to all staff. Instructions and examples are provided to assist people in completing the card.

Information to be provided includes:

- name, position title
- section, unit
- location, phone number
- description of function
- listing of skills, knowledge
- experience in dealing with crises, and
- keywords

The Assistant Director (or designate) will collect the completed forms, edit for consistency in presentation, have the material entered into a computer and then assemble the inventory.

Access

Access to the information is most efficiently achieved by computer and every effort should be made to facilitate computer access to staff inside and outside WRB.

Anyone with access to the system who needs to locate specific skills and expertise would do so by dialing up the directory and selecting a series of appropriate keywords from a menu provided. Based on the keywords selected, information on the appropriate staff specialist(s) would appear. A keyword menu is provided in Attachment #1; an example of accessing information is shown in Attachment #2.

Updating

The Directory of WRB Staff Expertise will be updated continuously on the computer. As positions and functions change, or staff join or leave the Branch, appropriate Directory information will be entered into the computer. Every year, in January, each member of the WRB staff is to review his/her entry in the WRB Directory and, in writing, advise the Assistant Director of changes. As a result, the computerized information base will always be relatively current.

Benefits of Proposed Approach

- Direct and rapid identification of specific skills, knowledge and expertise of WRB staff
- Visibility for WRB staff specialists
- Essential for an effective crisis management plan
- Individual staff directly responsible for their own information profile
- Information perpetually updated
- Easily accessible by Branch staff and appropriate staff of regions, other branches and other agencies

Implementation Plan - DIRECTORY OF STAFF EXPERTISE

	DESCRIPTION	START	FINISH	RESPONSIBILITY	DELIVERABLES
1	Collection of Staff Skills Information	June 25/91	Nov. 29/91	Crises Coord./Staff	List of Staff Skills
2	Software Evaluation/Demonstration	Sep. 3/91	Oct. 31/91	Crises Coordinator	
3	Software Selection and Acquisition	Nov. 1/91	Feb. 14/92	Crises Coordinator	Directory Software
4	Data Entry	Feb. 17/92	Mar. 13/92	Crises Coordinator	Computerized Staff Directory
5	Annual Update of Inventory	Jan. 2/93	Jan. 15/93	Crises Coord./Staff	Updated Inventory

ATTACHMENT #1 KEYWORD MENU

PRIMARY	SECONDARY	
APIOS	SECONDARY PRECIPITATION	MANAGEMENT
ABATEMENT	AGRICULTURE	MINING
ADMINISTRATION	ALGAE	MUNICIPAL
	AQUATIC PLANTS	MUTAGENICITY
BIOASSESSMENT	AREAS OF CONCERN	
	ASSESSMENT	NUTRIENT
COMPUTER SYSTEMS	ASSIMILATION	
CONTAMINANTS		OBJECTIVES
CONTROL	BENTHOS	OPERATIONAL
	BIOLOGICAL	ORGANIC
DIFFUSE SOURCE	BIOMONITORING	
DRINKING WATER	BUDGETARY	PERMITS
		PESTICIDES
EUTROPHICATION	CAPACITY	PETROLEUM
	CHEMICAL	PHYSICAL
FINANCIAL	CLAMS	PHYTOPLANKTON
	CLERICAL	PLANNING
LIMNOLOGY	COMPLIANCE	POINT SOURCE
	CONSTRUCTION	PONDS
MISA	CONTAMINANTS	PUBLIC
MODELLING	CURRENTS	PULP & PAPER
MONITORING		PWQO
	DATA	
OBJECTIVES	DATABASE	RECORDS
	DEVELOPMENT	REMEDIAL
PERSONNEL	DOCUMENT FINISHING	REPORTING
POLLUTION	DREDGING	RESERVOIRS
POLICY		RESEARCH
PREVENTION	ENRICHMENT	RESTORATION
		RISK ASSESSMENT
RAPS	FISH	RIVERS
REGULATIONS	FLOW	RURAL
RESEARCH		
	GENOTOXICITY	SECRETARIAL
SURVEILLANCE	GLWQA	SEDIMENT
	GREAT LAKES	SEWER USE
TECHNOLOGY	GROUNDWATER	SHORELINE
	GUIDELINES	STORM WATER
WATER QUALITY		STREAMS
WATER QUANTITY	HYDRO	SUPPORT
WATER TAKING	HYDROLOGY	SURFACE WATER
	IJC	TECHNICAL ADVISE
	INDUSTRIAL	TECHNOLOGY
	INFORMATION	TESTING
	INLAND	TOXICITY
	INORGANIC	TRAINING
	INVESTIGATION	TREATMENT
	INVESTIGATION	TRENDS
	IRON & STEEL	TRIBUTARY
		TUMOURS
	LAKES	
	LAKEFILL	URBAN
	LEACHATE	
	LICENCES	WATER
		WELL
		WASTE
		WORD PROCESSING

ATTACHMENT #2

EXAMPLE OF ACCESSING INFORMATION

> ***Note:*** ***A computer program to store and access the Directory has not been selected. It is anticipated, however, that access would be along the lines of the steps described below.***

- Access the Directory of WRB Staff Expertise
- A listing of primary and secondary keywords will appear on the screen
- Select the most appropriate primary keyword and as many secondary keywords as required to describe the information sought.

  Example: You are looking for the author of Provincial Water Quality Guidelines for pesticides.

  Select and Enter Keywords:

  - OBJECTIVES
  - GUIDELINES
  - SURFACE WATER
  - PESTICIDES

- Once the list of keywords has been entered, the computer will bring up the list of individuals with responsibilities, skills or knowledge fitting this description, for example:

  Sid Sperling
  Senior Scientist
  Bioassessment Unit, Watershed Management
  1 St. Clair Ave. W., 323-5555

  Position: To develop Provincial Water Quality objectives, Guidelines and interim guidelines for the protection of aquatic communities, recreation and aesthetics

  Skills and Knowledge: Aquatic toxicology, fish, invertebrate algae, food webs, GLWQA. Expert witness: toxicity of chemicals.

B.2 INTERNAL COMMUNICATIONS

Importance

Flexible, strong and clear internal communications play a major role in the effectiveness of any organization. The Water Resources Branch is a complex organization for many reasons. It comprises over 240 staff, conducts over 200 projects and located in at least 3 locations. Moreover, its programs are themselves complex, involving an array of technical and scientific issues and components, many of which impinge on or are affected by others. Finally, as a working subculture, the Branch is dynamic and multifaceted, with a rich mixture of unique individuals with special skills that all serve a common whole.

In these circumstances, the Branch can ill afford to ignore the significance of effective communications among staff for its success. Despite the fact that most people have heavy workloads, and many feel that they do not have time to find out what people in other sections are doing, or simply to socialize, the time devoted to isolated efforts will not likely be ultimately well spent. It is possible that new and improved information from another section could make a staff member's own work easier or better. Projects can be delivered more efficiently; resources can be better used; staff can feel part of a larger professional purpose. The list of potential improvements from good communications can go on.

Nearly all the focus groups expressed concern about the limited communication within the Branch at the present. They wanted to see better communication - at all levels (unit, section, Branch) and in many ways (inter-section projects, staff-management interaction, newsletters, etc.). They suggested that as a minimum, staff be informed about program status on a regular basis; this could be all staff for major programs, or section or project staff for related programs. Modifications in physical accommodations were also suggested as a way of accommodating better Branch communications.

Purpose

Although improvements in internal Branch communications rely heavily on the initiative and inclinations of individuals, a number of measures can actively promote the conditions that enable better Branch interactions. A commitment needs to be made to better communications on the part of all Branch staff, and certain means for accomplishing this goal need to be put in place to demonstrate that commitment. In effect, any other measures proposed for improving Branch effectiveness depend to a large extent on the success of this initiative.

Current Approach

The Water Resources Branch does not currently have a strategy for optimizing internal Branch communications. This is done on an ad hoc basis by Sections, resulting in different procedures and levels of success. In these circumstances, a strategy for improved internal communications that would benefit all staff cannot be developed. As it is now, most Branch staff have little opportunity to become aware of programs and areas of interest in other sections of the Branch. Perhaps because of this, there is little communication among staff when programs are being developed - between sections, and infrequently, within sections.

Proposed Approach

It is recommended that the Branch take practical steps to improve communications within the Branch, focusing on 4 main areas:

- General communications
- Program communications
- Electronic communications
- Physical modifications

General Communications

- The Branch will promote Section meetings on a regular basis, to bring staff up to date on section status and items of interest. These meeting could also include presentations from staff of other sections. Monthly reports, highlighting each section's major activities should be considered.

- A series of luncheon seminars will be held at all WRB locations to offer professional insights into interesting topics and programs, e.g., networks, innovative environmental programs, technological advances, section initiatives, etc. The WRB Management Team will coordinate the implementation of the seminars by seeking out volunteers who will plan and implement them.

- The Branch will publish a regular Branch newsletter which will include such things as program updates, issues of interest, upcoming seminars/conferences, staff status, WRB achievements, general interest items, social notes, etc.

- The Branch will hold an annual staff conference for all Branch staff, focusing on strategic planning, environmental directions, and communications.

- The Branch will develop an inventory of staff skills, expertise and experience. It will serve to inform Branch staff of the range, diversity and nature of WRB staff capabilities, thereby encouraging communication, as well as to inform clients outside the Branch of WRB's professional portfolio.

Program Communications

- An activity that will promote inter-section communications is the opportunity for staff to work in an inter-section capacity for define long-term plans for WRB in terms of program categories like research, monitoring, abatement and administration, etc. (See Long-term Planning Strategic Action.)

- Staff working in the same program categories should meet twice a year to discuss the status of work and issues in that category, as well as possible inter-sectional partnerships for the coming year.

- As part of the yearly planning cycle, programs will be evaluated for possibilities for integration and partnerships. This will be done both at the section level and subsequently by Management Team. (See Short-term (Annual) Planning Strategic Action.)

Electronic Communications

- The Branch will foster better communications by ensuring that all staff at 1 St. Clair Avenue West are connected to the existing Branch Local Area Network, and staff at Resources Road and Dorset are linked into a wide area network.

- This networking would enable staff to effectively and efficiently communicate electronically through electronic messaging, file transfer, etc.

Physical Modifications

- The Branch will analyze existing space allocations, and where possible, make every effort to locate sectional staff in the same working area, in order to facilitate communications at the section and unit levels.

- The Branch will designate a common area as a staff coffee lounge at 1 St. Clair Avenue West to encourage improved communication among staff of all sections.

Benefits of Proposed Approach

- Specific opportunities for improving morale, team-building
- Improved program development
- Improved efficiency/effectiveness

Implementation Plan - INTERNAL COMMUNICATIONS

	DESCRIPTION	START	FINISH	RESPONSIBILITY	DELIVERABLES
	General Communications				
1	Initiation of semi-monthly meetings	Oct. 1/91		Managers/Staff	Section Meetings
2	Quarterly Branch Newsletters	Oct. 1/91		PRO/Staff	Branch Newsletter
3	Annual Branch Conference	May 1/92		Director/Staff	Branch Conference
4	Initiation of Luncheon Seminars	Feb. 3/92		Mgmt. Team/Staff	Luncheon Meetings
	Program Communications (see Prog. Integrat.)				
	Electronic Communications				
1	Procure and Install Local Area Network (LAN)		Mar. 31/92	Systems Planning	Local Area Network (1 St. Clair)
2	Staff Local Area Network Training	Sep. 3/91	Mar. 31/92	Sys. Planning/Staff	Staff LAN Training
3	Procure and Install Wide Area Network (WAN)	Dec. 2/91	Mar. 31/92	Sys. Plan./Lab/ SITB	Wide Area Network (Lab/Dorset)
4	Staff Wide Area Network Training	Jan. 2/92	Mar. 31/92	Sys. Planning/Staff	Staff WAN Training
	Physical Modifications (see Accommodations/Facilities)				

B.3 COMMUNICATIONS WITH CLIENTS

Importance

It is imperative that anyone delivering a product or a service understand the needs and expectations of their clients. This can be achieved only through appropriate communication at all stages of a project.

Several staff inside and outside the Water Resources Branch have commented on our apparent inability or lack of willingness to effectively communicate program information. While this generalization may not apply to all WRB undertakings, it does underscore the importance of recognizing that communicating with our clients is an important part of our routine activities.

Purpose

Communication with clients is important from a number of perspectives:

- to identify and understand their needs and expectations
- to keep them abreast of progress in the development and delivery of a product or service
- to follow-up after delivery to ensure that the product/service has met their needs
- to promote the capabilities of the WRB

Current Approach

Communication with clients appears to be "ad hoc", varying significantly from individual to individual. There are no Branch-wide guiding principles or overt mechanisms to ensure that communications take place.

Proposed Approach

The Water Resources Branch will recognize clients' interests as an integral part of program development and incorporate these needs in both its long and short-term planning processes.

Staff of the Water Resources Branch produce a wide variety of products and services and each one should be designed to meet the specific needs of a client. Clients can range from the co-worker in the next office to the general public. The largest single client group of WRB is the MOE Regions.

Universal rules for requiring communication with clients would likely be ineffective and destined to failure. With that in mind, the Strategic Planning Committee opted to incorporate communication requirements as integral parts of several other recommendations including:

Long-Term Planning, Short-Term Planning, Program Integration, Project Management and Managing Environmental Crises. The Directory of Staff Expertise is, in itself, an important contribution to improved communications.

Benefits of Proposed Approach

- Products/services are more likely to meet the clients' expectations
- Clients' frustrations are reduced
- Branch image is improved

Implementation Plan - COMMUNICATIONS WITH CLIENTS

1 Milestones Incorporated in Other Strategic Actions

- Long-Term Planning
- Short-Term Planning
- Project Management
- Program Integration
- Managing Environmental Crises

B.4 COMMUNICATIONS WITH THE PUBLIC

Importance

The demand for information about the environment, as well as the critical need for accurately informing and educating the public about environmental matters in light of growing direct public involvement in decision making, makes communication with the public an essential activity.

The Water Resources Branch, with its wide variety of programs, information bases and very substantial range of expertise and experience, has an important role to play in communicating with the public.

Purpose

The Water Resources Branch needs to identify its role and responsibilities in the process of informing, advising and educating the public on issues related to water management. Any communications plan developed for WRB must be consistent with a Ministry-wide communications master plan.

Current Approach

The Water Resources Branch undertakes a number of activities to communicate to the public information generated through its wide range of programs and projects. While these activities are usually carried out with the assistance or advice of the Public Affairs and Communications Services Branch, there is no generally recognized WRB communication plan or Ministry master plan. As a result, there are few links or consistent approaches amongst the communications programs.

Proposed Approach

The Water Resources Branch will develop its communications vision and, in concert with the Public Affairs and Communications Services Branch (PACSB), will develop a communications plan.

A detailed WRB action for communicating with the public cannot be implemented until the relative roles and responsibilities of the WRB and PACSB are clarified. However, in light of the importance of public education and involvement, the Water Resources Branch must start now to formulate its public communications vision for water resources issues in Ontario.

- The Director, in consultation with the Management Team, will form an "ad hoc" committee of staff to develop the WRB communications vision. It is suggested that the committee be composed of three members with practical experience in dealing with the public.

- This committee will, through consultation with staff, address a range of questions about public communication including:
  - What types of information does the public want and need?
  - What types of information is the WRB in a position to supply?
  - What are the most efficient and effective methods of conveying our information?
  - What are the most effective ways of obtaining feedback from the public?
- Following consultation, the committee will prepare a report that puts forward a communications vision for the Branch.
- Upon approval of this plan, the Management Team and committee will form a small delegation of two or three to work with appropriate representatives of the Public Affairs and Communications Services Branch to refine the vision, define relative responsibilities and put the plan in action.

Benefits of Proposed Approach

- More effective delivery of information to the public
- Delivery of information that the public wants and needs
- Greater ability to integrate information from several sources
- Delivery of information within the context of a Ministry-wide communications plan

Implementation Plan - COMMUNICATIONS WITH THE PUBLIC

	DESCRIPTION	START	FINISH	RESPONSIBILITY	DELIVERABLES
1	Establish WRB Communications Committee	Sep. 3/91	Sep. 30/91	Management Team	Communications Committee (CC)
2	Prepare WRB Communications Vision	Oct. 1/91	Dec. 19/92	Commun. Comm.	Draft WRB Communicat's Vision
3	Mgmt. Team Approval/Commun. Plan	Jan. 2/92	Jan. 31/92	Mgmt. Committee	Approved WRB Commun. Vision
4	Estab. WRB-PACSB/Develop Action Plan	Feb. 3/92	Mar. 31/92	CC/PACSB	Action Plan
5	Implement Action Plan	Apr. 1/92	Mar. 31/93	CC/PACSB	Implementation of Action Plan

GROUP C

HUMAN RESOURCES MANAGEMENT

C.1 ORIENTATION

Importance

Understanding the structure, functions and procedures of the Water Resources Branch is fundamentally important to a new employee if that person is expected to become a productive member of the Branch community.

Purpose

A comprehensive introduction to the MOE and WRB will assist in serving the best interests of the Branch by giving new staff a sense of the history, structure and purpose of the Branch, as well as providing practical information on how to deal with administrative procedures and Branch routines.

Current Approach

There is currently no formal, comprehensive orientation package available for new staff. "Ad hoc" orientation, if given at all, is usually provided by the new employee's immediate supervisor.

Proposed Approach

The Water Resources Branch, in cooperation with Human Resources Branch, will ensure that all new WRB staff receive appropriate orientation.

- The WRB Program Resources Office (PRO), working in cooperation with the Human Resources Branch, will implement the development of an orientation package that will include an overview of the structure and functions of the branches, regions, boards and committees. Particular emphasis will be placed on the organization, responsibilities and programs of the various sections of the Water Resources Branch. There will also be a section of the package on "How to Survive!" that will include an explanation of such things as the day-to-day procedures, forms (e.g., time slips, expense claims), etc.

  The orientation package will be composed of visual (slide or video) presentations, textual materials, introduction to Branch staff and tours of appropriate MOE facilities (e.g., the Labs, the Dorset facility, Great Lakes vessels, etc.).

- The PRO will implement an annual update of the orientation package.

- The PRO will see that all Branch staff supervisors are aware of the contents and trained in presentation procedures of the orientation package. PRO will see that all supervisors are made aware of any annual updates to the package.

- Immediate supervisors will be expected to give the orientation package to new staff members shortly after the new employee comes on board. Implementation will begin as soon as the orientation package has been completed by PRO and approved by Management Team.

Benefits of Proposed Approach

- All new staff will receive orientation that is consistent and comprehensive
- New staff should be able to "acclimatize" more quickly

Implementation Plan - ORIENTATION

	DESCRIPTION	START	FINISH	RESPONSIBILITY	DELIVERABLES
1	Development of Orientation Package	Sep. 3/91	Dec. 19/91	PRO	Orientation Package
2	Train Supervisors/Applica'n of Package	Jan. 2/92	Jan. 31/92	PRO	Supervisors Trained/Orientat'n
3	Presentation/Orient. Pkg. to New Staff	Feb. 3/92		Immediate Supervisor	Orientation of New Staff
4	Annual Update of Orientation Package	Mar. 2/93	Mar. 31/93	PRO	Updated Orientation Package

C.2 STAFF TRAINING/SKILL DEVELOPMENT

Importance

Human resource management was one of the 5 main issues that staff identified as being done poorly in Water Resources Branch. While recognition, motivation, challenge, job satisfaction, regular evaluation and advancement opportunities are key aspects of effective human resource management, staff training/skill development is a fundamental enabling mechanism that can enhance all these aspects of effectiveness.

Staff are having to cope with increasing workloads and management to cope with greater resource restraints. In these circumstances, it becomes increasingly important for staff to have the skills and confidence to deal effectively with job demands. Also, the technical nature of the Branch has resulted in a low priority being assigned to management training for management staff. In the current climate of increasing demands for productivity and staff effectiveness, these skills become more important than ever.

Purpose

- Training/skill development is important for two purposes:
  - It helps a person become more capable and confident in the role that person plays within the organization, thus enhancing job effectiveness.
  - It broadens a person's skills and knowledge so that he/she can grow and take advantage of new opportunities for personal satisfaction or for expansion and development of duties.
- Training and skill development can only be purposeful if needs are carefully evaluated, and then training/development linked to the individual's skill deficiencies, job demands and career aspirations in a planned, incremental and measured/evaluated process.

Current Approach

Assessment of training needs varies from section to section. In some cases the supervisor may suggest a course for an employee; more often, however, the employee approaches management with a request for training.

According to Ministry procedures, training needs are expected to be identified jointly by the supervisor/employee (or manager/supervisor) in a regular performance assessment (PA). The incidence of such assessments varies greatly across the Branch. Some staff have not had

evaluations for years, and some are now performing duties that bear little resemblance to those in their current job specification. Again, this situation varies greatly across the Branch. Nor is any system in place across the Branch to link Work Plans with individual job responsibilities/specifications/PAs.

In such a climate of inconsistency, it is difficult to identify and evaluate training/skill development needs and address them appropriately.

Proposed Approach

There are four key elements to an effective staff training/skill development procedure in WRB, which can, in turn, enhance staff effectiveness and job satisfaction:

Maintenance of position specifications

- A fundamental requirement of this strategic action is up-to-date position specifications. This is acknowledged as a time-consuming task and should be addressed in a series of steps:
  - identify those position specifications that are out of date
  - priorize those that need to be changed
  - develop a schedule for completing the task
  - implement the process

Identification of training/skill development needs

- **Identifying** appropriate enhancement courses must be done by the supervisor/manager working directly with the employee on the basis of these essential kinds of information:
  - the individual's PA, and recognized training consultations between supervisor/employee or manager/supervisor; this includes the Director's judgement as to management training appropriate for managers
  - the section's Work Plan, and the individual's role in it

Availability of training opportunities

- Ensuring that training/skill development opportunities are **available** to all line and management staff at least once a year, preferably twice a year, but **guaranteed** at least once a year
  - A central and a section inventory of courses, conferences, etc. should be accessible to all staff
  - Staff completing courses should submit a report to their supervisor/manager (copy to a central inventory) on the value of the course, the skills they believe they have gained, and how these skills can be applied in their work.

Tracking and assessment of skills development

- **Tracking and assessment** of skills gained is important not only for the Branch - better resource deployment - but also for the individual - a sense of achievement. The following is proposed:

  - Staff skill development is inventoried at the Branch level, and as appropriate, linked to the Branch Directory of Staff Expertise. This central inventory could take the form of an annual report by managers to the Director indicating PA's completed, training recommended, and training completed for each staff member (see Action C.3, page 129).

  - Skill development progress is regularly assessed at the section level and linked to Work Plans and PAs.

In addition, a fourth component could have major benefits for improved Branch functioning.

Branch-wide management training

- Senior management should identify Branch-wide management training needs and arrange for courses, i.e., bring in consultants, on topics such as: effective management, communications, project management, time management.

Benefits of Proposed Approach

- improves staff confidence and effectiveness
- provides basis for more effective and integrated skill deployment across the Branch as needed
- lays groundwork for better career planning and succession planning
- guarantees development opportunities to all staff
- responsibility for training is shared jointly by individual members of staff and their supervisors
- managers are accountable for seeing that training plans are developed and followed

Implementation Plan - STAFF TRAINING/SKILL DEVELOPMENT

	DESCRIPTION	START	FINISH	RESPONSIBILITY	DELIVERABLES
1	Identify Skill Development Needs	Sep. 3/91	Mar. 31/92	Supervisors w/Staff	Staff Training Needs Identified
2	ID & Prioritize Pos. Specs. for Updating	Jan. 2/92	June 30/92	Supervisors w/Staff	Updated Staff Position Specs.
3	Implementation of Updating	July 2/93	June 30/93	Mgrs./Supervisors	Updated Position Specs.
4	Inventory of Staff Training Available	Sep. 3/91	Nov. 29/91	Manager of MSTC	Inventory of Training Available
5	Tracking & Assessment/Staff Skills Developmt.	Apr. 1/92		Mgrs./Supervisors	Section Annual Reports
6	Conduct Management Training	Jan. 2/92		Mgmt.Team/Manager of MSTC	Management Training

C.3 FEEDBACK/ASSESSMENT/ EVALUATION

Importance

Considerable attention was given in focus groups to the importance of what could be called staff professional well-being. This was variously discussed in terms of feedback between staff and management, progress assessment (milestones), evaluation (performance appraisals), motivation, recognition, interaction on decisions, and professional development. Some of these issues are addressed (partially or fully) in other recommended strategic actions, including Program Integration, Internal Communication, Training/Staff Development, and Retaining Staff Expertise/Succession Planning.

There remained a range of focus group concerns about which staff have strong feelings. These were combined into a recommended strategic action under the heading of Feedback/Assessment/Evaluation. This category was able to include considerations which are fairly intangible but nevertheless critical ones in fostering staff morale.

Components

For this discussion, the components of this topic, as identified by focus groups, fall into three main areas and include the following:

Feedback

- informal interchange between staff and managers/supervisors, including two-way communication (staff concerns/ideas; management's updates on decisions/meetings); managers' availability and visibility; greater staff participation in planning/decisions

Assessment

- informal progress assessment by managers/supervisors of staff's work/activities (on or off-track); informal recognition of staff achievements; tangible recognition (results/rewards) of performance

Evaluation

- regular, formal, documented performance appraisals

Purpose

The Branch needs to incorporate into daily operations and management sound practices for encouraging the best performance possible by every staff member. Good performance is often a function of good staff relations. Improvements in staff relations, including recognition of staff achievements/progress, and good professional interaction between line

staff and management staff, are critical for Branch productivity and program success. Good staff relations are at least as important as other sound procedures in enhancing the Branch's effectiveness and efficiency.

Current Approach

At present, the above components are inconsistently evident in the Branch. It is recognized that the Director has encouraged Management Team to practice these principles and encourage supervisors to do so, and to generally promote a climate of comfortable professional interaction. It is also recognized that Branch management is under increasing pressure to deliver both broad program responsibilities and up-to-date corporate management practices in the Branch.

Proposed Approach

The Branch must make concerted efforts, wherever possible, to provide tangible indications of the staff's work continuum throughout the year. These can take many forms, but cannot occur in the first place if there is not a foundation of communication and interaction among staff, particularly line staff and management staff. A commitment to feedback/assessment/evaluation needs to be demonstrable; a series of platitudes is meaningless.

If such indications are real and realistic, staff morale can improve dramatically. If both management and line staff live up to the expectations of the other, in say, recognition and delivery respectively, respect on the parts of both increases, and thus, staff morale as well. If these expectations are not met, the situation can degenerate instead into a deficit of cynicism.

A number of actions are proposed to carry forward two main principles:

- Recognition of staff is vitally important, particularly as the Branch is limited in the overt rewards it can offer. This can be formal or informal, positive or correctively supportive.

- Interaction/recognition needs to be built into tangible circumstances and activities. These can take the form of staff involvement in long- and short-term planning, section meetings, published acknowledgements, training, etc.

Specific measures include the following:

- Managers/supervisors provide feedback to staff on decisions/meetings, program development and progress; staff keep managers/supervisors advised of issues, ideas, concerns

- Staff should be given credit for ideas, achievements, e.g., acknowledgement at meetings or in reports, words of appreciation, symbols (trips/conferences, MISA banquet)

- There should be tangible indications of staff roles/performance including staff development, e.g.,
  - job challenges
  - developmental assignments
  - professional development excursions
  - current, accurate job specifications
  - parallel streaming where possible
  - career training, aptitude development
  - disciplinary measures where appropriate
- Informal progress assessments of staff responsibilities in particular programs should be built into staff/management interactions, as a means of keeping management current on program status, and acknowledging staff as an integral part of program effectiveness
- Annual formal documented performance appraisals (PAs) of all staff should be mandatory. Management staff of each section will collectively prepare a schedule for conducting PAs and are responsible for adhering to the schedule. Each section will submit a record of completion of PAs that were scheduled, to be part of a Branch summary report available to all staff (see Action C.2, page 125).

Benefits of Proposed Approach

- Encourages two-way communication
- Promotes a healthy management climate
- Improves morale, and fosters trust
- Promotes a staff sense of belonging ("owning shares in the organization")

Implementation Plan - FEEDBACK/ASSESSMENT/EVALUATION

	DESCRIPTION	START	FINISH	RESPONSIBILITY	DELIVERABLES
1	Annual Formal Performance Appraisals			Supervisors/Staff	Annual PA for Each Staff Member
2	a) Chart Showing Scheduled PA Dates by Sect.	Oct. 1/91	Oct. 31/91	Mgmt. Support Coord.	WRB PA Schedule
	b) Quarterly Sect. Updates/Branch Reporting	Jan. 2/92		Mgrs./Exec. Asst.	Branch Summary

C.4 RETAINING STAFF EXPERTISE AND SUCCESSION PLANNING

Importance

The acquisition of knowledge and the honing of skills does not end when one leaves school. On-the-job experience is often as important as academic training.

Many long-time members of the Water Resources Branch have developed a base of knowledge and/or skills that are invaluable to the operation of the Branch but would be lost if those people were to retire, transfer out of the Branch, move to the private sector or even be promoted up-the-line.

Actions to attract and retain excellent staff, as well as actions to train successors so that skills and knowledge are not lost when key staff leave, are both critically important to the success and the future of the Water Resources Branch.

Purpose

The knowledge and skills of staff are fundamental to the efficiency and effectiveness of all parts of the Water Resources Branch. It is in the Branch's best long-term interest to recognize the importance of maintaining these bases of expertise.

Develop a system to identify critical skills and individual knowledge bases among Branch staff. Establish appropriate mechanisms to retain this expertise or transfer it to other staff.

Current Approach

There is no formal mechanism for succession planning in place in the Water Resources Branch. Ad hoc procedures involving staff training programs may exist within sections, but procedures such as job shadowing or apprenticeships are not known to be commonplace.

Proposed Approach

Supervisors and managers in each section should identify critical areas of expertise and undertake measures to ensure that they are not completely lost when an individual leaves. Various measures are available to meet individual situations. These include:

- "Twinning" positions
- Job shadowing
- Apprenticeships
- Developmental positions
- Job rotation
- Technology transfer sessions
- Special tasks (e.g., research project)

- Field/site experience
- Expenses-paid training or re-education
- Attending and participating in seminars and conferences
- "Coffee break bull sessions"
- Development of expert systems
- Ensure challenging tasks to attract and retain excellent staff

Senior Branch management should encourage such measures and undertake other actions often beyond the control of sections to attract and retain excellent staff. Examples of such management actions are:

- Create a healthy and attractive working environment
- Provide incentives for outstanding employees
- Press for parallel streaming so that staff do not have to opt for management positions in order to obtain higher salaries

Benefits of Proposed Approach

- The Branch is in the best position to fulfil its mandate
- Environmental crises are managed most efficiently
- Programs and projects have the benefit of the highest level of technical competence
- The Branch maintains continuity in its ability to provide expertise in specific areas

Implementation Plan - RETAINING STAFF EXPERTISE AND SUCCESSION PLANNING

	DESCRIPTION	START	FINISH	RESPONSIBILITY	DELIVERABLES
1	Identify Critical Areas of Staff Expertise	Jan. 3/92	Feb. 28/92	Supervisors/Mgrs.	Areas of Expertise Identified
2	Implement Expertise/Succession Plan. Meas.	Mar. 2/92	Nov. 30/92	Supervisors/Mgrs.	Maintain Areas of Expertise
3	Annual Audit of Retaining Expertise	Jan. 4/93		Management Team	Annual Audit

C.5 ACCOMMODATIONS/ FACILITIES

Importance

Staff spend a significant portion of their lives in the workplace and should, therefore, expect accommodation and facilities that are conducive to effectively carrying out their duties.

The WRB has grown so quickly over the past few years that the number of staff far exceed the space available to accommodate them satisfactorily. Most concerns expressed by staff relate to the crowded conditions and poor quality environment at 1 St. Clair Avenue West.

Another important concern expressed by staff is the lack of library and central filing facilities. Both are required if the Branch is to function effectively.

Purpose

All staff should expect to be provided with an adequate work station and facilities to carry out the duties expected of them. Staff, in turn, should take responsibility to assure that their work space is maintained in an acceptable condition.

Branch management must take the necessary initiatives and exert appropriate influence to achieve satisfactory accommodations and working facilities for all Branch staff.

Current Approach

The quality of workplace conditions varies widely across the Branch. Efforts are being made to alleviate some of the major deficiencies while a permanent solution, relocation of the staff at 1 St. Clair Avenue, is being arranged.

The Branch currently does not have a library but limited service such as journal circulation is being maintained. The Branch does not currently have a full-scale, operational central filing system.

Proposed Approach

The Water Resources Branch will make every effort to provide staff with appropriate accommodation and facilities to effectively carry out their work.

- The Manager, MSTC, will continue to develop a detailed office plan for the 1 St. Clair location and appropriate moves will be made to alleviate major problems and, where possible, consolidate the staff of sections located at 1 St. Clair (some sections are now scattered all over the building). Any accommodation problems at the other WRB locations (125 Resources Road, Dorset) should be brought to the attention of the Manager, MSTC, for consideration and action.

- Management will continue to exert influence to see that the announced plan to move out of 1 St. Clair toward the end of 1992 is achieved. Appropriate planning will take place to ensure that a new location will accommodate a Branch library, central files area, a staff lunchroom, and adequate storage and loading facilities. Status reports on the announced move should be provided periodically to staff.

- The WRB Management Team will assign a small team of staff to evaluate alternatives for library and central filing facilities and make recommendations. Management Team will act on appropriate recommendations and take the necessary actions to staff and implement these facilities.

Benefits of Proposed Approach

- Improved staff morale and productivity
- Better conditions for internal communications
- Complete and accessible Branch records
- Access to library services necessary for product/service delivery

Implementation Plan - ACCOMMODATIONS/FACILITIES

	DESCRIPTION	START	FINISH	RESPONSIBILITY	DELIVERABLES
1	Development of Detailed Office Plan	July 2/91	Sep. 30/91	Manager of MSTC	Revised Office Plans
2	Relocation of Staff Within 1 St. Clair	Oct. 1/91	Dec. 19/91	Manager of MSTC	Staff located in new office space
3	Plan Framework for WRB Library/Filing Syst.	Jan. 3/92	Mar. 31/92	Mgmt.T./Imp.Comm.	Library/File System Plan
4	Implement Library	Apr. 1/92		Librarian	WRB Library
5	Implement Full Central WRB Files	Apr. 1/92		Filing Staff	WRB Central File

PART V

IMPLEMENTATION

IMPLEMENTATION OF THE STRATEGIC ACTIONS

Effective implementation of the Strategic Actions is critical to the success of the Strategic Planning Process. In order to ensure that the recommendations of this report are efficiently put into practical use, a great deal of consideration has gone into the implementation plan.

Detailed implementation procedures are an integral part of each of the sixteen Strategic Actions described in Part IV. In this chapter, the individual implementation plans for each Action are summarized and displayed in a number of different ways.

Schedule 1 - shows, in summary, the long-term implementation requirements through 1996.

Schedule 2 - shows, in detail, all of the key steps for each Strategic Action for the next year and one-half.

Schedule 3 - identifies those individuals, by position or group, who are responsible for each component of the overall implementation plan.

To efficiently deliver the implementation actions, it is recommended that the project management approach be employed. The Project Manager, in this case, would be the Director of the Water Resources Branch. The core Project Team would be the members of WRB Management Team. Duties related to overseeing the day-to-day progress of implementation would be the responsibility of the Strategic Planning Coordinator. Others with responsibility for implementing major Strategic Actions, e.g., the chair of the Long-Term Planning Committee, would participate on the Project Management Team as needed.

Collectively, the team would:

a) Oversee implementation of the plan

b) Ensure that the project plan is appropriate, current, and understood by all Branch staff

c) Monitor the progress of implementation and resolve any problems that might arise

d) Provide feedback to staff on implementation

e) Maintain appropriate links with the Ministry Strategic Planning initiatives

Staff of the Water Resources Branch have high expectations with respect to implementation of the recommendations of this report. Everyone must share the responsibility for seeing that the plan is successfully carried out.

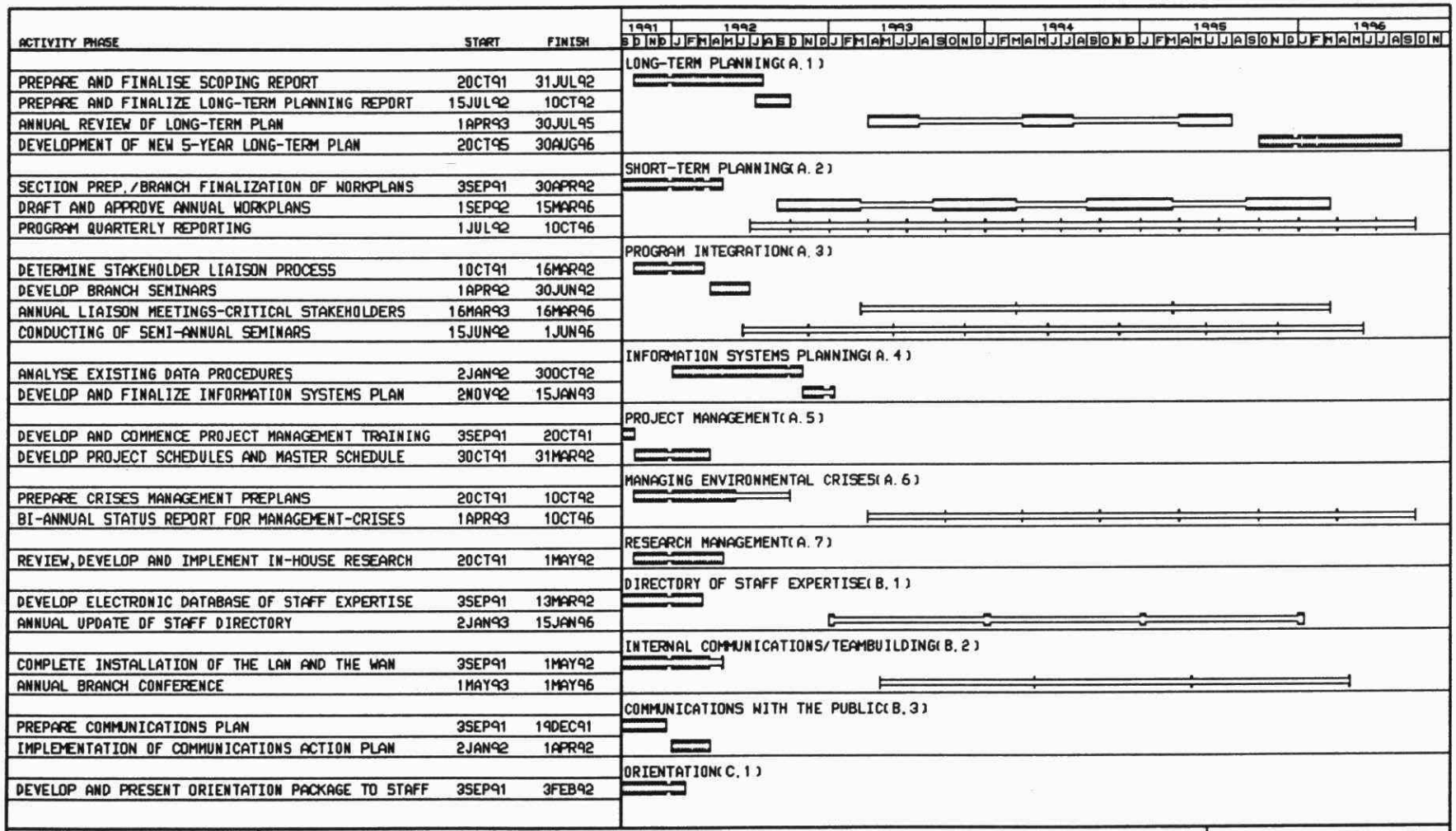
SCHEDULE 1

SUMMARY SCHEDULE -

FIVE-YEAR PLAN

SCHEDULE 1

ACTIVITY PHASE	START	FINISH
LONG-TERM PLANNING(A.1)		
PREPARE AND FINALISE SCOPING REPORT	20OCT91	31JUL92
PREPARE AND FINALIZE LONG-TERM PLANNING REPORT	15JUL92	10OCT92
ANNUAL REVIEW OF LONG-TERM PLAN	1APR93	30JUL95
DEVELOPMENT OF NEW 5-YEAR LONG-TERM PLAN	20OCT95	30AUG96
SHORT-TERM PLANNING(A.2)		
SECTION PREP./BRANCH FINALIZATION OF WORKPLANS	3SEP91	30APR92
DRAFT AND APPROVE ANNUAL WORKPLANS	1SEP92	15MAR96
PROGRAM QUARTERLY REPORTING	1JUL92	10OCT96
PROGRAM INTEGRATION(A.3)		
DETERMINE STAKEHOLDER LIAISON PROCESS	10CT91	16MAR92
DEVELOP BRANCH SEMINARS	1APR92	30JUN92
ANNUAL LIAISON MEETINGS-CRITICAL STAKEHOLDERS	16MAR93	16MAR96
CONDUCTING OF SEMI-ANNUAL SEMINARS	15JUN92	1JUN96
INFORMATION SYSTEMS PLANNING(A.4)		
ANALYSE EXISTING DATA PROCEDURES	2JAN92	30OCT92
DEVELOP AND FINALIZE INFORMATION SYSTEMS PLAN	2NOV92	15JAN93
PROJECT MANAGEMENT(A.5)		
DEVELOP AND COMMENCE PROJECT MANAGEMENT TRAINING	3SEP91	20OCT91
DEVELOP PROJECT SCHEDULES AND MASTER SCHEDULE	30CT91	31MAR92
MANAGING ENVIRONMENTAL CRISES(A.6)		
PREPARE CRISES MANAGEMENT PREPLANS	20CT91	10OCT92
BI-ANNUAL STATUS REPORT FOR MANAGEMENT-CRISES	1APR93	10OCT96
RESEARCH MANAGEMENT(A.7)		
REVIEW,DEVELOP AND IMPLEMENT IN-HOUSE RESEARCH	20CT91	1MAY92
DIRECTORY OF STAFF EXPERTISE(B.1)		
DEVELOP ELECTRONIC DATABASE OF STAFF EXPERTISE	3SEP91	13MAR92
ANNUAL UPDATE OF STAFF DIRECTORY	2JAN93	15JAN96
INTERNAL COMMUNICATIONS/TEAMBUILDING(B.2)		
COMPLETE INSTALLATION OF THE LAN AND THE WAN	3SEP91	1MAY92
ANNUAL BRANCH CONFERENCE	1MAY93	1MAY96
COMMUNICATIONS WITH THE PUBLIC(B.3)		
PREPARE COMMUNICATIONS PLAN	3SEP91	19DEC91
IMPLEMENTATION OF COMMUNICATIONS ACTION PLAN	2JAN92	1APR92
ORIENTATION(C.1)		
DEVELOP AND PRESENT ORIENTATION PACKAGE TO STAFF	3SEP91	3FEB92



Planning Unit : Day

Project Start : 3SEP91
Project Finish: 10CT96

WATER RESOURCES BRANCH
STRATEGIC PLANNING IMPLEMENTATION
SUMMARY SCHEDULE-FIVE YEAR PLAN

Sheet 1 of 2

Data Date: 3SEP91
Plot Date: 29AUG91

Date	Revision	Checked	Approved

ACTIVITY PHASE	START	FINISH
IDENTIFY SKILLS DEVELOPMENT NEEDS	3SEP91	1APR92
UPDATE JOB SPECIFICATIONS	2JAN92	30JUN92
MONITOR PERSONNEL ASSESSMENT PROCESS	1OCT91	2JAN92
ANALYSE AND RETAIN AREAS OF EXPERTISE	3JAN92	2MAR92
RELOCATE APPROPRIATE WRB STAFF	30SEP91	1APR92

Primavera Systems, Inc.

Planning Unit : Day

Project Start : 3SEP91
Project Finish: 10CT96

WATER RESOURCES BRANCH
STRATEGIC PLANNING IMPLEMENTATION
SUMMARY SCHEDULE-FIVE YEAR PLAN

Sheet 2 of 2

Data Date: 3SEP91
Plot Date: 29AUG91

Date	Revision	Checked	Approved

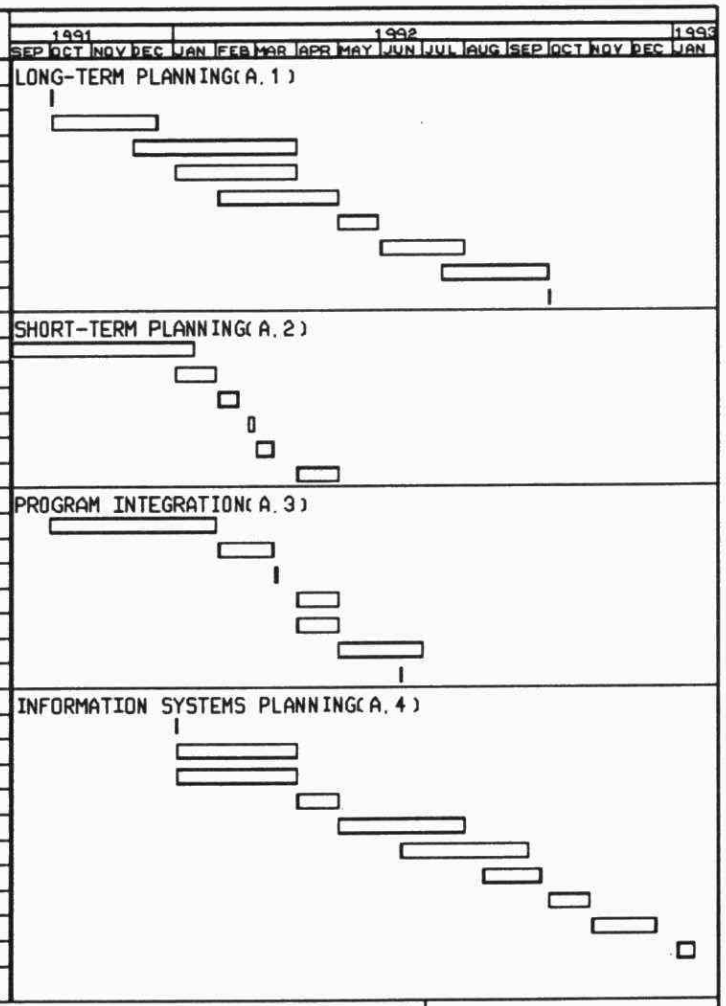
SCHEDULE 2

DETAILED SCHEDULE - STRATEGIC ACTIONS

SCHEDULE 2

SCHEDULE #2

ACTIVITY ID	ACTIVITY DESCRIPTION	START	FINISH
A1.101	ESTABLISH LONG-TERM PLANNING COMMITTEE	20CT91	20CT91
A1.102	L.T.P.C. ESTABLISHES TERMS OF REF.,ETC.	30CT91	19DEC91
A1.105	PREPARATION OF VISIONARIES REPORT	2DEC91	31MAR92
A1.104	PREPARATION OF PROBLEM ASSESSMENT REPORT	2JAN92	31MAR92
A1.106	PREPARATION OF SCOPING REPORT	3FEB92	30APR92
A1.107	FINALIZATION OF SCOPING REPORT	1MAY92	29MAY92
A1.108	STAFF FOCUS GROUP SESSIONS	1JUN92	31JUL92
A1.109	PREPARATION OF LONG-TERM PLANNING REPORT	15JUL92	30SEP92
A1.110	PUBLICATION OF LONG-TERM PLANNING REPORT	10CT92	10CT92
A2.201	DRAFT INDIVIDUAL WORKPLANS	3SEP91	15JAN92
A2.202	SECTION REVIEW AND APPROVAL OF WORKPLANS	2JAN92	31JAN92
A2.203	PREPARE SECTION WORKPLAN SUMMARIES	3FEB92	17FEB92
A2.204	BRANCH WORKPLAN REVIEW AND APPROVAL	26FEB92	28FEB92
A2.205	CIRCULATION OF WORKPLAN SUMMARIES	2MAR92	13MAR92
A2.206	REVISE WORKPLANS BASED ON ACTUAL BUDGETS	1APR92	30APR92
A3.305	LIAISON PROCESS ESTABLISHED (TERMS OF REF.,ETC.)	10CT91	31JAN92
A3.306	ORGANIZATION OF FIRST ANNUAL MEETING	3FEB92	13MAR92
A3.307	FIRST ANNUAL LIAISON MEETING	16MAR92	16MAR92
A3.301	IDENTIFY SEMINAR CATEGORIES	1APR92	30APR92
A3.302	DEVELOP GENERIC SEMINAR AGENDAS	1APR92	30APR92
A3.303	CATEGORY GROUPS DEVELOP SPECIFIC AGENDAS	1MAY92	30JUN92
A3.304	START OF SEMI-ANNUAL SEMINARS	15JUN92	15JUN92
A4.309	ESTABLISH INFORMATION SYSTEMS PLANNING TEAM	2JAN92	2JAN92
A4.310	DETERMINE TERMS OF REFERENCE AND APPROACH	3JAN92	31MAR92
A4.311	DEVELOP AND TENDER CONTRACT FOR CONSULTANT	3JAN92	31MAR92
A4.319	HIRE CONSULTANT	1APR92	30APR92
A4.312	ANALYSE EXISTING DATA PROCEDURES	1MAY92	31JUL92
A4.313	EVALUATE AVAILABLE INFORMATION TECHNOLOGIES	15JUN92	15SEP92
A4.314	PREPARE INTERIM INFORMATION SYSTEMS REPORT	14AUG92	24SEP92
A4.315	CONDUCT STAFF FOCUS GROUPS	10CT92	30OCT92
A4.316	DEVELOP INFORMATION SYSTEMS PLAN	2NOV92	18DEC92
A4.317	APPROVAL OF INFORMATION SYSTEMS PLAN	4JAN93	15JAN93



Activity Bar/Early Dates
Critical Activity
Progress Bar

Primavera Systems, Inc.

Planning Unit : Day

Project Start : 3SEP91
Project Finish: 10CT96

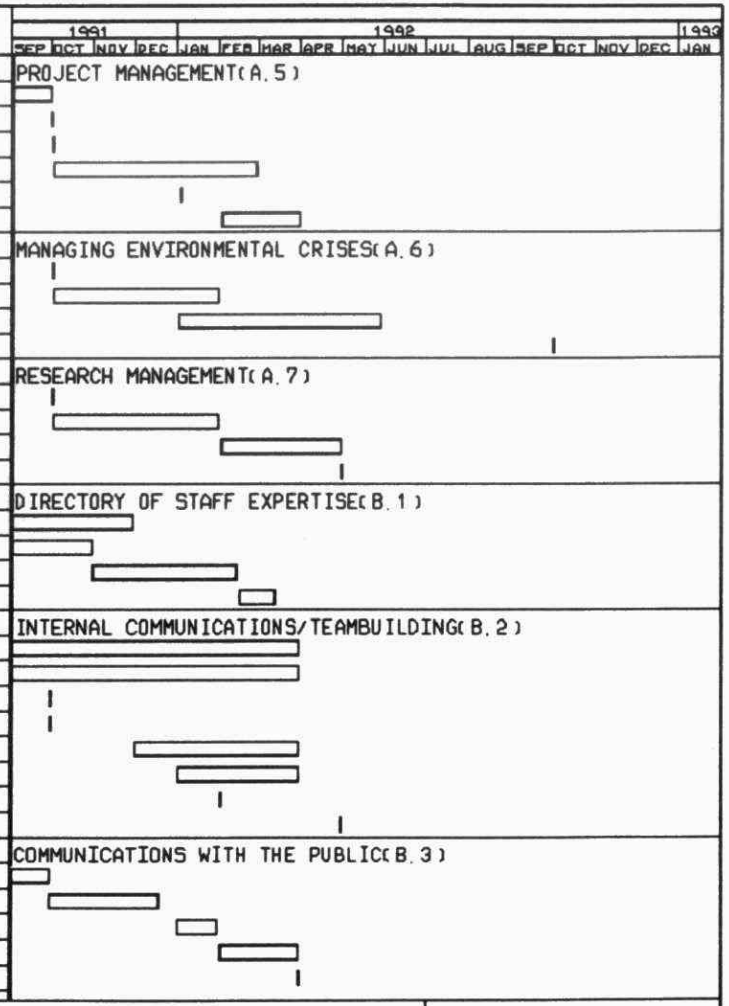
WATER RESOURCES BRANCH
STRATEGIC PLANNING IMPLEMENTATION
DETAILED SCHEDULE-STRATEGIC ACTIONS

Sheet 1 of 3

Data Date: 3SEP91
Plot Date: 29AUG91

Date	Revision	Checked	Approved

ACTIVITY ID	ACTIVITY DESCRIPTION	START	FINISH
A5.405	FINALIZE PROJECT MANAGEMENT TRAINING COURSES	3SEP91	30SEP91
A5.406	START PROJECT MANAGEMENT TRAINING SESSIONS	10CT91	10CT91
A5.401	DESIGNATE PROJ.MGRS INCLUDING RESPONSIBILITIES	20CT91	20CT91
A5.402	DEVELOP PROGRAM SCHEDULES	30CT91	28FEB92
A5.403	INITIATE PROJECT UPDATE MEETINGS WITH DIRECTOR	3JAN92	3JAN92
A5.404	DEVELOP BRANCH MASTER SCHEDULE	3FEB92	31MAR92
A6.501	IDENTIFY CRISIS COORDINATOR	20CT91	20CT91
A6.503	DETERMINE MAIN CRISES CATEGORIES	30CT91	31JAN92
A6.504	PREPARE CRISES MANAGEMENT PRE-PLANS	2JAN92	29MAY92
A6.505	START SEMI-ANNUAL STATUS REPORT TO MGMNT. TEAM	10CT92	10CT92
A7.601	IDENTIFY RESEARCH COORDINATOR	20CT91	20CT91
A7.602	REVIEW IN-HOUSE RESEARCH ACTIVITIES	30CT91	31JAN92
A7.603	DEVELOP RESEARCH PLAN	3FEB92	30APR92
A7.604	BEGIN IMPLEMENTATION OF RESEARCH PLAN	1MAY92	1MAY92
B1.701	COLLECTION OF STAFF SKILLS INVENTORY	3SEP91	29NOV91
B1.702	SOFTWARE EVALUATION/DEMONSTRATION	3SEP91	31OCT91
B1.703	SOFTWARE SELECTION AND ACQUISITION	1NOV91	14FEB92
B1.704	DATA ENTRY OF STAFF EXPERTISE	17FEB92	13MAR92
B2.805	COMPLETE INSTALLATION OF LAN	3SEP91	31MAR92
B2.806	CONDUCT LAN TRAINING FOR STAFF	3SEP91	31MAR92
B2.801	INITIATION OF MONTHLY SECTION MEETINGS	10CT91	10CT91
B2.802	INITIATION OF QUARTERLY BRANCH NEWSLETTER	10CT91	10CT91
B2.807	PROCURE AND INSTALL WIDE AREA NETWORK (WAN)	2DEC91	31MAR92
B2.808	CONDUCT WAN TRAINING FOR BRANCH STAFF	2JAN92	31MAR92
B2.804	INITIATION OF LUNCHEON SEMINARS	3FEB92	3FEB92
B2.803	SECOND ANNUAL BRANCH CONFERENCE	1MAY92	1MAY92
B3.901	ESTABLISH WRB AD HOC COMMITTEE TO ADDRESS COMM.	3SEP91	30SEP91
B3.902	PREPARE COMMUNICATIONS PLAN	10CT91	19DEC91
B3.903	MANAGEMENT TEAM APPROVAL OF COMMUNICATIONS PLAN	2JAN92	31JAN92
B3.904	ESTABLISH WRB/PACSB TEAM-DEVELOP ACTION PLAN	3FEB92	31MAR92
B3.905	BEGIN IMPLEMENTATION-COMMUNICATIONS ACTION PLAN	1APR92	1APR92



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Critical Activity
Progress Bar

Primavera Systems, Inc.

Planning Unit - Day

Project Start : 3SEP91
Project Finish: 10CT46

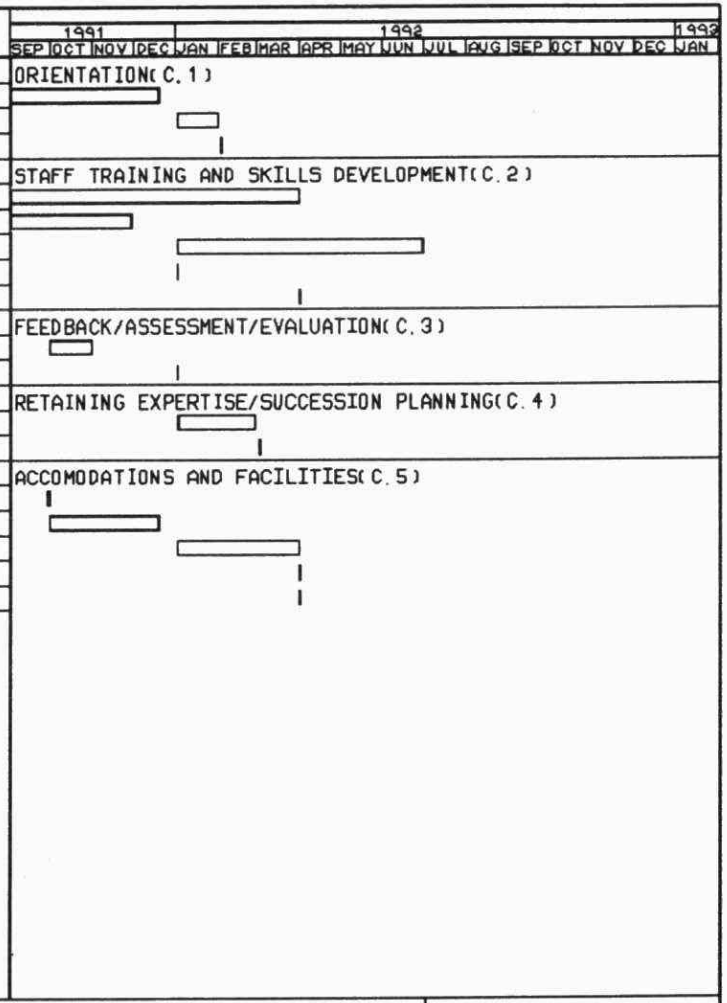
WATER RESOURCES BRANCH
STRATEGIC PLANNING IMPLEMENTATION
DETAILED SCHEDULE-STRATEGIC ACTIONS

Sheet 2 of 3

Data Date: 3SEP91
Plot Date: 29AUG91

Date	Revision	Checked	Approved

ACTIVITY ID	ACTIVITY DESCRIPTION	START	FINISH
C1.1001	DEVELOP ORIENTATION PACKAGE	3SEP91	19DEC91
C1.1003	TRAIN SUPERVISORS IN PACKAGE APPLICATION	2JAN92	31JAN92
C1.1002	PRESENTATION OF ORIENTATION PACKAGE TO NEW STAFF	3FEB92	3FEB92
C2.1101	IDENTIFY SKILL DEVELOPMENT NEEDS	3SEP91	31MAR92
C2.1103	DETERMINE INVENTORY OF STAFF TRAINING AVAILABLE	3SEP91	29NOV91
C2.1102	UPDATE STAFF POSITION SPECIFICATIONS	2JAN92	30JUN92
C2.1105	BEGIN MANAGEMENT TRAINING	2JAN92	2JAN92
C2.1104	BEGIN TRACKING OF STAFF SKILLS DEVELOPMENT	1APR92	1APR92
C3.1201	DEVELOP CHART SHOWING P/A'S BY NAME/SECTION	1OCT91	31OCT91
C3.1202	BEGIN REPORTING QUARTERLY P/A STATUS BY SECTION	2JAN92	2JAN92
C4.1301	IDENTIFY CRITICAL AREAS OF STAFF EXPERTISE	3JAN92	28FEB92
C4.1302	BEGIN IMPL. MEASURES TO RETAIN EXPERTISE	2MAR92	2MAR92
C5.1401	FINALIZE DETAILED OFFICE ACCOMODATION PLAN	30SEP91	30SEP91
C5.1402	RELOCATION OF WRB STAFF RE: OFFICE PLAN	1OCT91	19DEC91
C5.1403	PLAN FRAMEWORK FOR WRB LIBRARY AND FILING SYSTEM	2JAN92	31MAR92
C5.1404	START IMPLEMENTATION OF LIBRARY	1APR92	1APR92
C5.1405	START IMPLEMENTATION OF CENTRAL FILING	1APR92	1APR92



Activity Bar/Early Dates
Critical Activity
Progress Bar

Primavera Systems, Inc.

Planning Unit : Day

Project Start : 3SEP91
Project Finish: 19DEC96

WATER RESOURCES BRANCH
STRATEGIC PLANNING IMPLEMENTATION
DETAILED SCHEDULE-STRATEGIC ACTIONS

Sheet 3 of 3

Data Date: 3SEP91
Plot Date: 24AUG91

Date	Revision	Checked	Approved

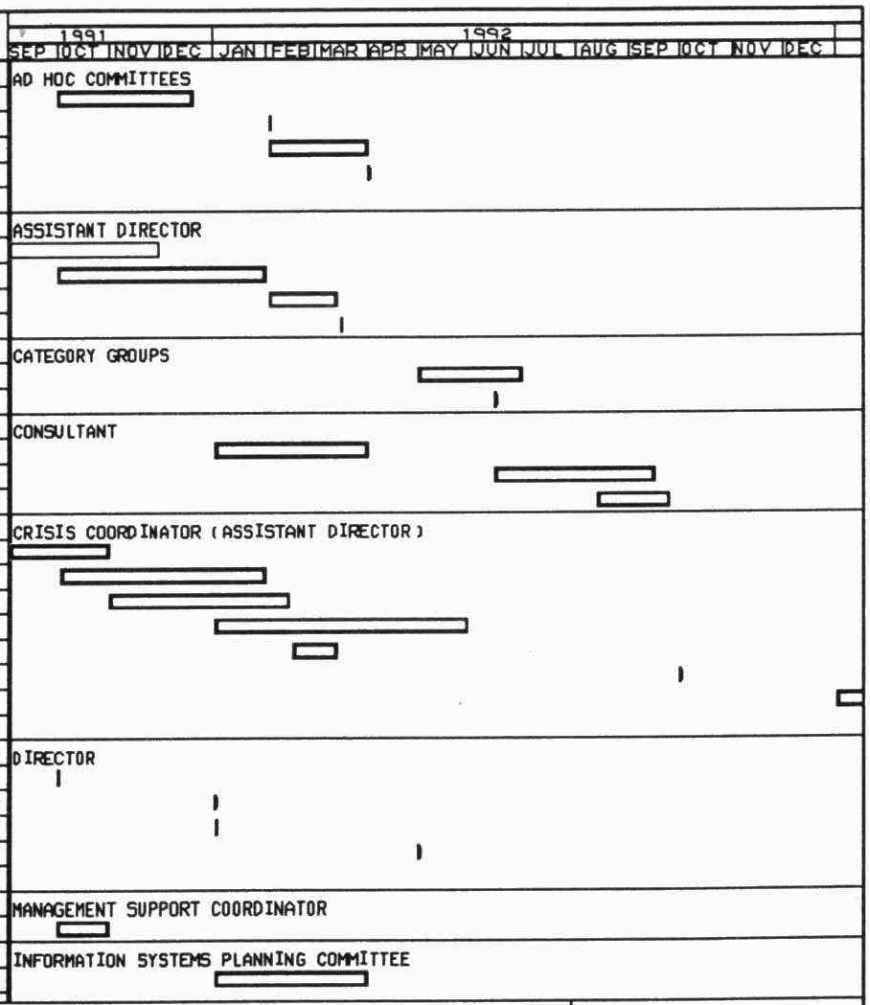
SCHEDULE 3

DETAILED SCHEDULE -

BY RESPONSIBILITY

SCHEDULE 3

ACTIVITY ID	ACTIVITY DESCRIPTION	START	FINISH
B3.902	PREPARE COMMUNICATIONS PLAN	1OCT91	19DEC91
B2.804	INITIATION OF LUNCHEON SEMINARS	3FEB92	3FEB92
B3.904	ESTABLISH WRB/PACSB TEAM-DEVELOP ACTION PLAN	3FEB92	31MAR92
B3.905	BEGIN IMPLEMENTATION-COMMUNICATIONS ACTION PLAN	1APR92	1APR92
B2.809	ANNUAL WATER RESOURCES BRANCH RETREAT	1MAY93	1MAY96
B1.701	COLLECTION OF STAFF SKILLS INVENTORY	3SEP91	29NOV91
A3.305	LIAISON PROCESS ESTABLISHED (TERMS OF REF.,ETC.)	1OCT91	31JAN92
A3.306	ORGANIZATION OF FIRST ANNUAL MEETING	3FEB92	13MAR92
A3.307	FIRST ANNUAL LIAISON MEETING	16MAR92	16MAR92
A3.303	CATEGORY GROUPS DEVELOP SPECIFIC AGENDAS	1MAY92	30JUN92
A3.304	START OF SEMI-ANNUAL SEMINARS	15JUN92	15JUN92
A1.104	PREPARATION OF PROBLEM ASSESSMENT REPORT	2JAN92	31MAR92
A4.313	EVALUATE AVAILABLE INFORMATION TECHNOLOGIES	15JUN92	15SEP92
A4.314	PREPARE INTERIM INFORMATION SYSTEMS REPORT	14AUG92	24SEP92
B1.702	SOFTWARE EVALUATION/DEMONSTRATION	3SEP91	31OCT91
A6.503	DETERMINE MAIN CRISES CATEGORIES	30CT91	31JAN92
B1.703	SOFTWARE SELECTION AND ACQUISITION	1NOV91	14FEB92
A6.504	PREPARE CRISES MANAGEMENT PRE-PLANS	2JAN92	29MAY92
B1.704	DATA ENTRY OF STAFF EXPERTISE	17FEB92	13MAR92
A6.505	START SEMI-ANNUAL STATUS REPORT TO MGMNT. TEAM	1OCT92	1OCT92
B1.705	ANNUAL UPDATE OF STAFF EXPERTISE DIRECTORY	2JAN93	15JAN96
A6.506	BI-ANNUAL STATUS REPORTS FOR MANAGEMENT	1APR93	1OCT96
B2.801	INITIATION OF MONTHLY SECTION MEETINGS	1OCT91	1OCT91
C2.1105	BEGIN MANAGEMENT TRAINING	2JAN92	2JAN92
A5.403	INITIATE PROJECT UPDATE MEETINGS WITH DIRECTOR	3JAN92	3JAN92
B2.803	SECOND ANNUAL BRANCH CONFERENCE	1MAY92	1MAY92
A3.308	ANNUAL LIAISON MEETINGS WITH KEY STAKEHOLDERS	16MAR93	16MAR96
C3.1201	DEVELOP CHART SHOWING P/A'S BY NAME/SECTION	1OCT91	31OCT91
A4.310	DETERMINE TERMS OF REFERENCE AND APPROACH	3JAN92	31MAR92



Activity Bar/Early Dates
Critical Activity
Progress Bar

Primavera Systems, Inc.

Planning Unit : Day

Project Start : 3SEP91
Project Finish: 1OCT96

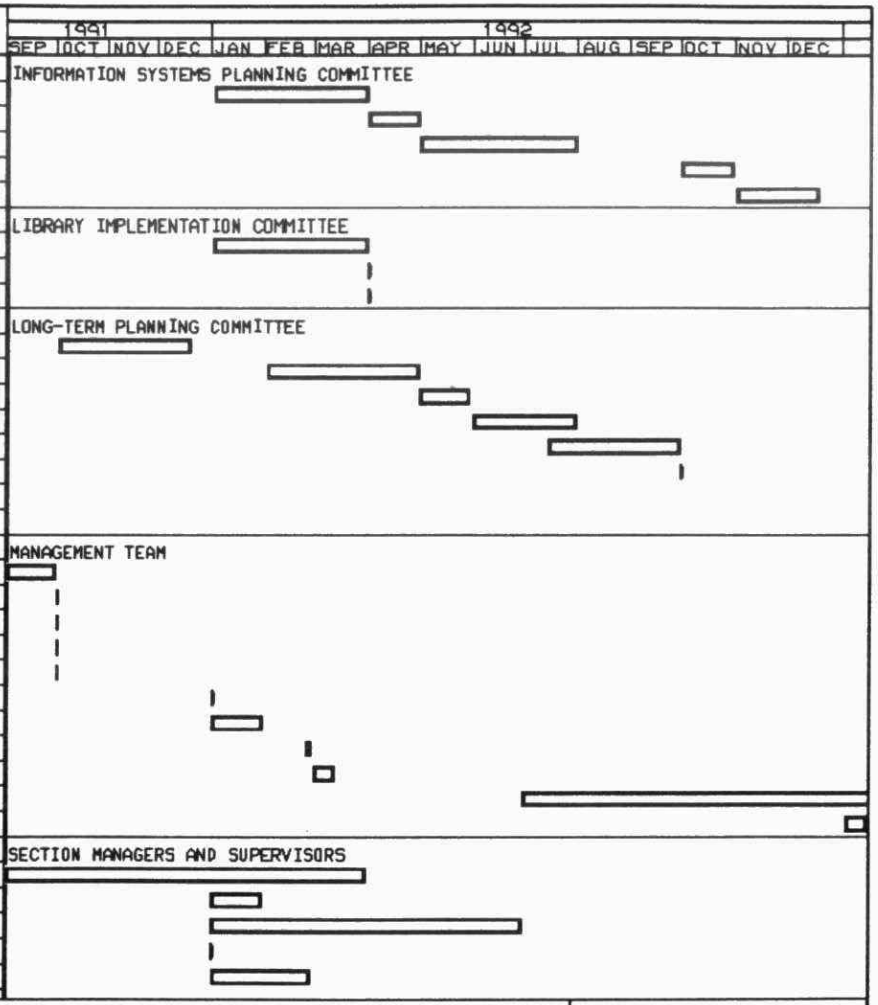
WATER RESOURCES BRANCH
STRATEGIC PLANNING IMPLEMENTATION
DETAILED SCHEDULE-BY RESPONSIBILITY

Sheet 1 of 4

Data Date: 3SEP91
Plot Date: 28AUG91

Date	Revision	Checked	Approved

ACTIVITY ID	ACTIVITY DESCRIPTION	START	FINISH
A4.311	DEVELOP AND TENDER CONTRACT FOR CONSULTANT	3JAN92	31MAR92
A4.319	HIRE CONSULTANT	1APR92	30APR92
A4.312	ANALYSE EXISTING DATA PROCEDURES	1MAY92	31JUL92
A4.315	CONDUCT STAFF FOCUS GROUPS	1OCT92	30OCT92
A4.316	DEVELOP INFORMATION SYSTEMS PLAN	2NOV92	18DEC92
C5.1403	PLAN FRAMEWORK FOR WRB LIBRARY AND FILING SYSTEM	2JAN92	31MAR92
C5.1404	START IMPLEMENTATION OF LIBRARY	1APR92	1APR92
C5.1405	START IMPLEMENTATION OF CENTRAL FILING	1APR92	1APR92
A1.102	L.T.P.C. ESTABLISHES TERMS OF REF.,ETC.	3OCT91	19DEC91
A1.106	PREPARATION OF SCOPING REPORT	3FEB92	30APR92
A1.107	FINALIZATION OF SCOPING REPORT	1MAY92	29MAY92
A1.108	STAFF FOCUS GROUP SESSIONS	1JUN92	31JUL92
A1.109	PREPARATION OF LONG-TERM PLANNING REPORT	15JUL92	30SEP92
A1.110	PUBLICATION OF LONG-TERM PLANNING REPORT	1OCT92	1OCT92
A1.111	ANNUAL LONG-TERM PLANNING EVALUATION/REVIEW	1APR93	30JUL95
A1.112	DEVELOPMENT OF NEW LONG-TERM PLAN	2OCT95	30AUG96
B3.901	ESTABLISH WRB AD HOC COMMITTEE TO ADDRESS COMM.	3SEP91	30SEP91
A1.101	ESTABLISH LONG-TERM PLANNING COMMITTEE	2OCT91	2OCT91
A5.401	DESIGNATE PROJ.MGRS INCLUDING RESPONSIBILITIES	2OCT91	2OCT91
A6.501	IDENTIFY CRISIS COORDINATOR	2OCT91	2OCT91
A7.601	IDENTIFY RESEARCH COORDINATOR	2OCT91	2OCT91
A4.309	ESTABLISH INFORMATION SYSTEMS PLANNING TEAM	2JAN92	2JAN92
B3.903	MANAGEMENT TEAM APPROVAL OF COMMUNICATIONS PLAN	2JAN92	31JAN92
A2.204	BRANCH WORKPLAN REVIEW AND APPROVAL	26FEB92	28FEB92
A2.205	CIRCULATION OF WORKPLAN SUMMARIES	2MAR92	13MAR92
A2.208	QUARTERLY REPORTING OF PROGRAM STATUS	1JUL92	1OCT96
A4.317	APPROVAL OF INFORMATION SYSTEMS PLAN	4JAN93	15JAN93
C2.1101	IDENTIFY SKILL DEVELOPMENT NEEDS	3SEP91	31MAR92
A2.202	SECTION REVIEW AND APPROVAL OF WORKPLANS	2JAN92	31JAN92
C2.1102	UPDATE STAFF POSITION SPECIFICATIONS	2JAN92	30JUN92
C3.1202	BEGIN REPORTING QUARTERLY P/A STATUS BY SECTION	2JAN92	2JAN92
C4.1301	IDENTIFY CRITICAL AREAS OF STAFF EXPERTISE	3JAN92	28FEB92



Activity Bar/Early Dates
Critical Activity
Progress Bar

Primavera Systems, Inc.

Planning Unit : Day

Project Start : 3SEP91
Project Finish: 1OCT96

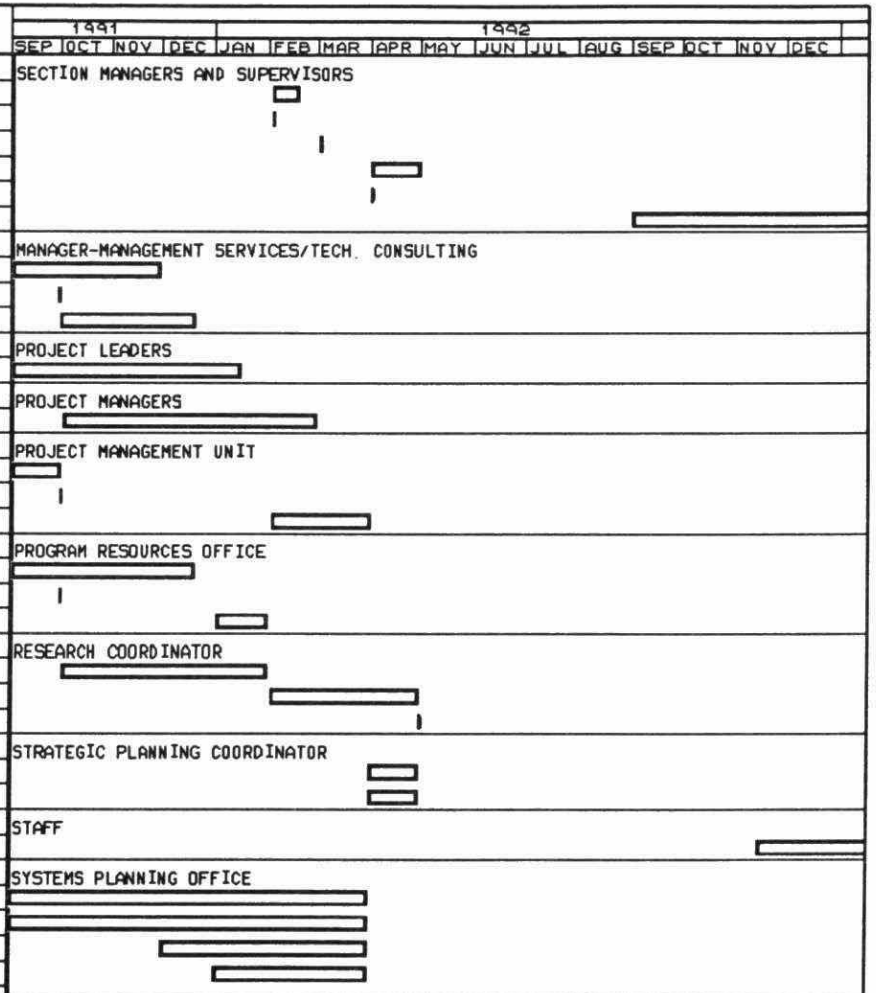
WATER RESOURCES BRANCH
STRATEGIC PLANNING IMPLEMENTATION
DETAILED SCHEDULE-BY RESPONSIBILITY

Sheet 2 of 4

Data Date: 3SEP91
Plot Date: 28AUG91

Date	Revision	Checked	Approved

ACTIVITY ID	ACTIVITY DESCRIPTION	START	FINISH
A2.203	PREPARE SECTION WORKPLAN SUMMARIES	3FEB92	17FEB92
C1.1002	PRESENTATION OF ORIENTATION PACKAGE TO NEW STAFF	3FEB92	3FEB92
C4.1302	BEGIN IMPL. MEASURES TO RETAIN EXPERTISE	2MAR92	2MAR92
A2.206	REVISE WORKPLANS BASED ON ACTUAL BUDGETS	1APR92	30APR92
C2.1104	BEGIN TRACKING OF STAFF SKILLS DEVELOPMENT	1APR92	1APR92
A2.207	DRAFT AND APPROVE ANNUAL SECTIONAL WORKPLANS	1SEP92	15MAR96
C2.1103	DETERMINE INVENTORY OF STAFF TRAINING AVAILABLE	3SEP91	29NOV91
C5.1401	FINALIZE DETAILED OFFICE ACCOMODATION PLAN	30SEP91	30SEP91
C5.1402	RELOCATION OF WRB STAFF RE: OFFICE PLAN	10CT91	19DEC91
A2.201	DRAFT INDIVIDUAL WORKPLANS	3SEP91	15JAN92
A5.402	DEVELOP PROGRAM SCHEDULES	30CT91	28FEB92
A5.405	FINALIZE PROJECT MANAGEMENT TRAINING COURSES	3SEP91	30SEP91
A5.406	START PROJECT MANAGEMENT TRAINING SESSIONS	10CT91	10CT91
A5.404	DEVELOP BRANCH MASTER SCHEDULE	3FEB92	31MAR92
C1.1001	DEVELOP ORIENTATION PACKAGE	3SEP91	19DEC91
B2.802	INITIATION OF QUARTERLY BRANCH NEWSLETTER	10CT91	10CT91
C1.1003	TRAIN SUPERVISORS IN PACKAGE APPLICATION	2JAN92	31JAN92
A7.602	REVIEW IN-HOUSE RESEARCH ACTIVITIES	30CT91	31JAN92
A7.603	DEVELOP RESEARCH PLAN	3FEB92	30APR92
A7.604	BEGIN IMPLEMENTATION OF RESEARCH PLAN	1MAY92	1MAY92
A3.301	IDENTIFY SEMINAR CATEGORIES	1APR92	30APR92
A3.302	DEVELOP GENERIC SEMINAR AGENDAS	1APR92	30APR92
A3.309	SEMI-ANNUAL SEMINARS FOR WRB STAFF	15NOV92	1JUN96
B2.805	COMPLETE INSTALLATION OF LAN	3SEP91	31MAR92
B2.806	CONDUCT LAN TRAINING FOR STAFF	3SEP91	31MAR92
B2.807	PROCURE AND INSTALL WIDE AREA NETWORK (WAN)	2DEC91	31MAR92
B2.808	CONDUCT WAN TRAINING FOR BRANCH STAFF	2JAN92	31MAR92



Activity Bar/Early Dates
Critical Activity
Progress Bar

Primavera Systems, Inc.

Planning Unit : Day

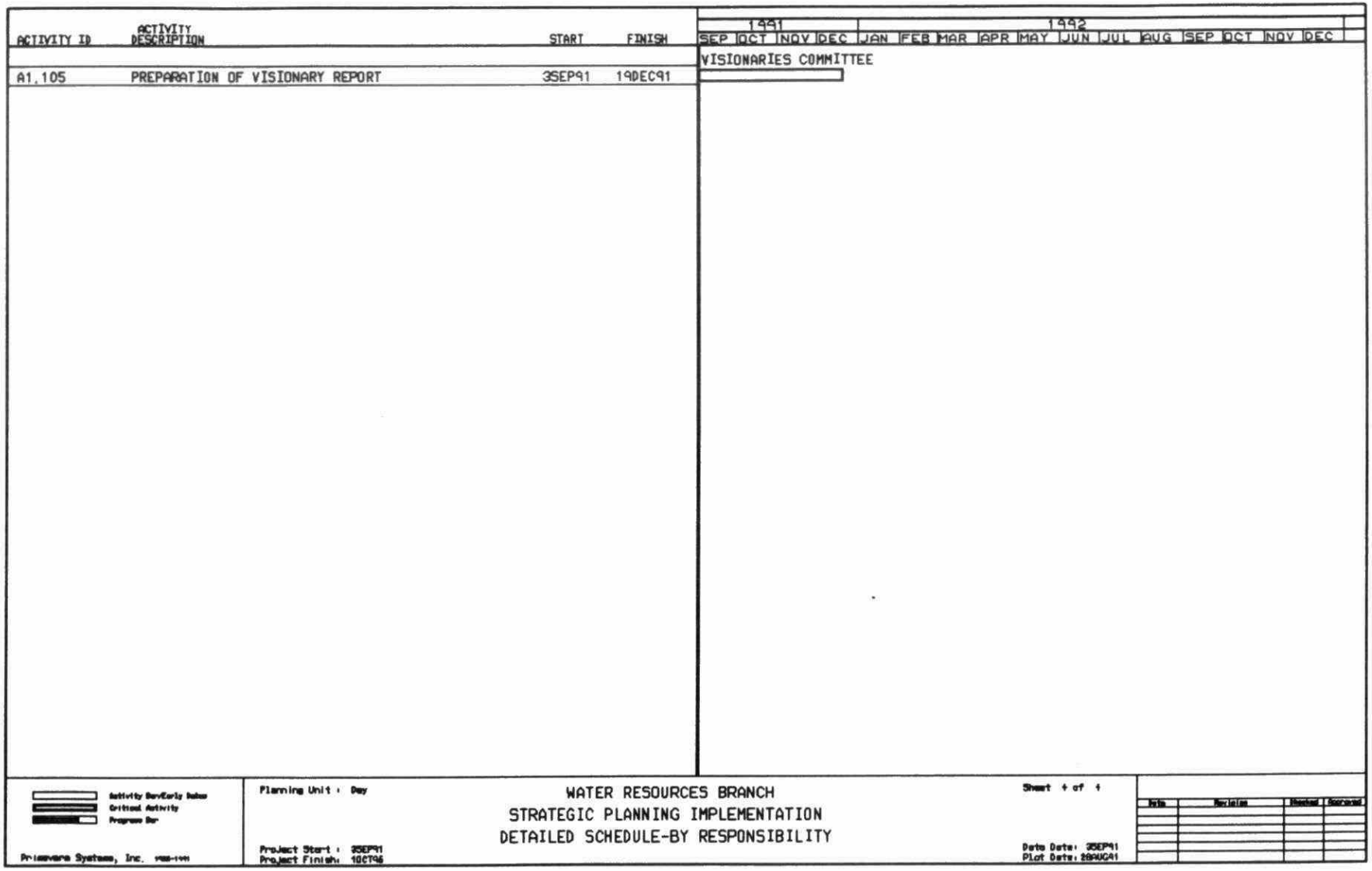
Project Start : 3SEP91
Project Finish: 10CT96

WATER RESOURCES BRANCH
STRATEGIC PLANNING IMPLEMENTATION
DETAILED SCHEDULE-BY RESPONSIBILITY

Sheet 3 of 4

Data Date: 3SEP91
Plot Date: 28AUG91

Date	Revision	Checked	Approved


ACTIVITY ID
ACTIVITY DESCRIPTION
START
FINISH
1991
1992
SEP OCT NOV DEC JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
A1.105
PREPARATION OF VISIONARY REPORT
3SEP91
19DEC91
VISIONARIES COMMITTEE
Activity Bar/Early Bars
Critical Activity
Progress Bar
Primavera Systems, Inc.
Planning Unit : Day
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WATER RESOURCES BRANCH
STRATEGIC PLANNING IMPLEMENTATION
DETAILED SCHEDULE-BY RESPONSIBILITY
Sheet 4 of 4
Data Date: 3SEP91
Plot Date: 28AUG91
Date
Revision
Checked
Approved

APPENDIX 1

LISTING OF WRB

PROGRAMS AND PROJECTS

1991 - 92

APPENDIX 1 – WATER RESOURCES BRANCH PROGRAMS–1991

PROG	SUBCAT	SECT	PROGRAM NAME	PROGRAM DESCRIPTION	DOE_000	P_Y	PRODUCT	CLIENT	CLIENTUSE
AP	POL	DW	Drinking Water Policy Devel.	Provide safe and adequate drinking water	103.8	3.0	Y	Y	Y
AP	POL	DW	Groundwater Protection Strategy	Protection of groundwater,conservation	18.3	4.1	Y	Y	Y
AP	POL	DW	Ont. Drinking Water Obj./Regs.	List contam. of concern & criteria doc.	50.0	1.0	Y	Y	Y
AP	PCS	GL	Hamilton Harbour RAP Partic.	Develop RAP– ident.causes,goals,impl.etc	0.0	0.3	Y	Y	Y
AP	PCS	GL	Metro Toronto RAP Science Comm.	Co–ord. all monit. & surveillance prgms	0.0	0.5	Y	Y	Y
AP	SCI	GL	Toronto Waterf't Dry Weather Outfall St.	Assess trace loadings from ss, cso's, stp's and wtp backwash	0.0	0.3	Y	Y	Y
AP	SCI	GL	St.Mary's R. Pilot Site Study (A):Effl'ts	Assess impact of discharges on water quality of St.Mary's River	0.5	0.3	Y	Y	Y
AP	PCS	GL	Wheatley Harbour RAP Partic.	Develop RAP– ident.causes,goals,impl.etc	0.0	0.2	Y	Y	Y
AP	PCS	GL	Collingwood Harbour RAP Partic.	Develop RAP– ident.causes,goals,impl.etc	0.0	0.5	Y	Y	Y
AP	SCI	GL	Hamilton Harbour Sed. Mass Balance Study	Estimate suspended sediment budget for the harbour	50.0	0.2	Y	Y	Y
AP	SCI	GL	Collingwood Har./Nottawasaga Bay Model'g	Estimate exchange between C.H./N.B.& STP discharge on Coll. Har.	45.0	0.2	Y	Y	Y
AP	PCS	GL	St.Marys R. RAP Participation	Develop RAP– ident.causes,goals,impl.etc	0.0	0.1	Y	Y	Y
AP	SCI	GL	Jackfish Bay Environmental Study	Assess water quality status of Jackfish Bay re Kimberly–Clark	0.0	0.6	Y	Y	Y
AP	SCI	GL	Spill Ass't Model Develop't for St.Clair	Develop models to predict toxic contaminant levels at WTP intakes	2.0	0.4	Y	Y	Y
AP	PCS	GL	Jackfish Bay RAP Participation	Develop RAP– ident.causes,goals,impl.etc	0.0	0.1	Y	Y	Y
AP	SCI	GL	Point–Source Impact Zone Assessment	Apply GIS techiques to show spatial patterns using Jackfish B. data	0.0	0.1	Y	Y	Y
AP	PCS	GL	Bay of Quinte RAP Participation	Develop RAP– ident.causes,goals,impl.etc	0.0	0.5	Y	Y	Y
AP	PCS	GL	Nipigon Bay RAP Participation	Develop RAP– ident.causes,goals,impl.etc	0.0	0.1	Y	Y	Y
AP	PCS	GL	St.Clair R. RAP Participation	Develop RAP– ident.causes,goals,impl.etc	0.0	0.1	Y	Y	Y
AP	PCS	GL	St. Lawrence (Cornwall) RAP	Develop RAP– ident.causes,goals,impl.etc	0.0	0.3	Y	Y	Y
AP	PCS	GL	Detroit R. RAP Participation	Develop RAP– ident.causes,goals,impl.etc	0.0	0.1	Y	Y	Y
AP	SCI	GL	Detroit R. Hydraulics Measurement Study	Provide data to enhance outfall assessments of Ontario sources	5.0	0.1	Y	Y	Y
AP	PCS	GL	Spanish R. RAP Participation	Develop RAP– ident.causes,goals,impl.etc	0.0	0.1	Y	Y	Y
AP	PCS	GL	Niagara River RAP Participation	Develop RAP– ident.causes,goals,impl.etc	0.0	0.2	Y	Y	Y
AP	SCI	GL	St.Mary's R. Pilot Site Study (B): Seds.	Assess the impact of discharges on sediment of St.Mary's River	0.5	0.2	Y	Y	Y
AP	SCI	GL	Allied Chemical Plume Tracking	Determine the mixing zone of the effluent by plume tracking	0.0	0.1	Y	Y	Y
AP	SCI	GL	Jackfish Bay Physic. & Chemic. Transport	Assess water movement patterns and impact and extent of discharges	4.0	0.1	Y	Y	Y
AP	SCI	GL	Detroit River Environmental Investigat's	Determine the extent of contamination along Ontario shore	0	0.1	Y	Y	Y
AP	PCS	GL	Thunder Bay RAP Participation	Develop RAP– ident.causes,goals,impl.etc	0.0	0.1	Y	Y	Y
AP	SCI	GL	Sault Ste. Marie STP Evaluation	Obtain hydrodynamic data at the outfall of the East End plant	0.5	0.4	Y	Y	Y
AP	PCS	GL	St.Marys R. MISA Pilot Site Rpt	W.Q.impacts & load alloc'n Algoma Steel	0.0	0.4	Y	Y	Y
AP	SCI	GL	Severn Sound Sediment Bioassessment	Assess compliance of sediments in Severn Sound with guidelines	10.0	0.1	Y	Y	Y
AP	SCI	GL	Talfourd Creek Investigations	Determine the impact of contamination on the St. Clair River	0.0	0.2	Y	Y	Y

APPENDIX 1 - WATER RESOURCES BRANCH PROGRAMS-1991

PROG	SUBCAT	SECT	PROGRAM NAME	PROGRAM DESCRIPTION	DOE_000	P_Y	PRODUCT	CLIENT	CLIENTUSE
AP	SCI	GL	St.Mary's River Modelling	Develop models to assess the impacts of discharges to St.Mary's R.	6.0	0.1	Y	Y	Y
AP	PCS	GL	Severn Sound RAP Coord. & Partic.	Develop RAP- ident.causes,goals,impl.etc	0.0	0.4	Y	Y	Y
AP	PCS	GL	Ont. Hydro Liaison Activities	Eval. impacts of O.H. power facilities	0.0	0.2	Y	Y	Y
AP	PCS	GL	Peninsula Harbour RAP partic.	Develop RAP- ident.causes,goals,impl.etc	0.0	0.1	Y	Y	Y
AP	SCI	GL	Toronto Waterf't Wet Weather Outfall St.	Assess trace loadings from ss, cso's, stp's and wtp backwash	90.0	0.4	Y	Y	Y
AP	PCS	GL	Port Hope RAP Participation	Develop RAP- ident.causes,goals,impl.etc	0.0	0.1	Y	Y	Y
AP	SCI	GL	St.Clair River MISA Modelling	Develop models to assess the impact of discharges on the St.Clair	1.0	0.1	Y	Y	Y
AP	SCI	GL	Thunder Bay Environmental Impacts	Determine the extent &impact of discharges in support of RAP	30.0	0.2	Y	Y	Y
AP	SCI	GL	Hamilton Har.Sediment Load Bioassessment	Determine qual. & quan. of susp. sed. discharged into the harbour	80.0	0.1	Y	Y	Y
AP	POL	L	PWQO and PWQG Development	Devel. PWQO/G for protection of aq. life	6.0	1.2	Y	Y	Y
AP	POL	L	Regulations - Effluent Toxicity	Devel. toxicity requirements for regs.	27.5	0.6	Y	Y	Y
AP	SCI	L	Toxicity Testing/Expert Testimony	Provide toxicity support for spill investigat's and court cases	6.0	0.8			
AP	POL	MI	MISA Regs. Petroleum Refining	Develop MISA Monitoring & Limits regs	N/A	N/A	Y	Y	Y
AP	POL	MI	MISA Regulation Mining Sector	Devel. regs- mining sect. per White Paper	N/A	2.0	Y	Y	Y
AP	POL	MI	MISA Regs Iron & Steel Sector	Develop MISA monitoring & limits regs	N/A	3.0	Y	Y	Y
AP	POL	MI	MISA Regs Pulp & Paper Sector	Develop effluent limits regulation	N/A	N/A	Y	Y	Y
AP	POL	MI	MISA Reg. Electric Power Gen.	Develop Effluent Limits regulation	400.0	2.0	Y	N/A	N/A
AP	POL	MM	Waterfront W.Q. Improvement Pgm.	Review plans, fund and monitor studies	600.0	1.0	Y	Y	Y
AP	PCS	MM	Training-Sewer Use Control Program	Provide training and upgrading for municipal sewer use staff	310.0	2.1	Y	Y	Y
AP	DM	MM	Data management-Sewer Use Control	Develop data management packages for municipal sewer use staff	25.0	2.2	Y	Y	Y
AP	POL	MM	CSO Control Interim Position Paper	Recommendations on CSO control & trtm't	10.0	0.5	Y	Y	Y
AP	POL	MM	Demonstration Projects-Sewer Use Control	Development of Municipal Enforcement Programs	36.0	0.9	Y	Y	Y
AP	POL	MM	New Microbiol. Recreational W.Q. Gdl'n.	Review Micro. data for new guideline	0.0	0.1	Y	Y	Y
AP	SCI	MM	Special Studies-Sewer Use Control	Support studies for the development of the sewer use program	52.0	3.0	Y	Y	N/A
AP	POL	MM	Compliance Assm't. Munic. STPs	Assess compliance STPs against MOE regs	60.0	1.0	Y	Y	Y
AP	PCS	MM	Assistance to municipalities	Development of sewer use controls	0.0	0.2	Y	Y	N/A
AP	PCS	MM	Stormwater Mgmt.-Tech. Review	Tech.advice stormwater BMP &Expt.witness	N/A	0.3	Y	Y	Y
AP	POL	MM	Co-op Student Studies	Support studies for sewer use control	68.0	0.0	Y	Y	N/A
AP	POL	MM	MISA Stormwater Control Gdl'n.	Stormwater poll'n control for ind. sites	70.0	0.1	Y	Y	Y
AP	POL	MM	Sewer Use Program Regulation	Development of sewer use program regulation	352.0	3.1	Y	Y	N/A
AP	POL	MM	MISA STP Compliance Reg.	Control munic. STP effluent quality	150.0	2.5	Y	Y	Y
AP	SCI	MM	Guidance Manual Development	Development of manuals for municipal staff/MOE	0.0	1.4	Y	Y	N/A
AP	POL	MM	Beach Improvement Program	Provide funds for Beach Improvement projects	0.0	0.3	Y	Y	Y
AP	POL	MM	Interim Stormwater Qual. Control Gdl'n.	Mgmt. of stormwater qual. in devel. areas	0.0	0.2	Y	Y	Y
AP	POL	MM	Lifelines Program- PCP Studies	Asst. munic. remedy pollution problems	700.0	1.5	Y	Y	Y

APPENDIX 1 - WATER RESOURCES BRANCH PROGRAMS-1991

PROG	SUBCAT	SECT	PROGRAM NAME	PROGRAM DESCRIPTION	DOE_000	P_Y	PRODUCT	CLIENT	CLIENTUSE
AP	DM	MO	MIDES Diskette Customization	Produce company specific parameter files for submission to MISA	60.0		Y	Y	Y
AP	SCI	WM	IN_SITU Fish Bioassay Program	Determine the impact of industr. effluents on fish placed IN_SITU	12.0	1.0	Y	Y	Y
AP	PCS	WM	QA/QC PWQMN Protocol Program	Protocols for PWQMN planning,field,lab	N/A	0.2	Y	Y	Y
AP	PCS	WM	LSEMS (L. Simcoe) Implementation	Funding long-term monit. lake & tribs	455.0	0.2	Y	Y	Y
AP	POL	WM	Wat'shed Mgmt. Strat. & Plan Develpt.	Develop water quality strategies & plans for watersheds	125.0	1.0	Y	Y	Y
AP	POL	WM	GLWQA-Annex 13 - Poll'n. from NPS	Reduce non-pt. land use poll'n sources	N/A	0.8	Y	Y	Y
AP	POL	WM	Rural Beaches (CURB)	Rural poll'n studies & remed. measures	500.0	0.5	N/A	N/A	N/A
AP	SCI	WM	Tox. Test'g support for Invest. & Enforce't.	Provide support for spills investigations and court cases	10.0	0.8	Y	Y	Y
AP	POL	WM	Aquatic Criteria Devel.	Devel. PWQO/G for protection of aq. life	N/A	4.0	Y	Y	Y
AP	POL	WM	Wetlands Policy Statement Review	Effects of impl'n. of Wetlands Policy	36.5	0.1	Y	Y	Y
AP	POL	WM	GLWQA-Annex 3 - Phosphorus Control	Reduce phos. inputs from agric. sources	298.0	1.3	Y	Y	Y
AP	PCS	WM	Technical Support Services	Transfer expertise & technol. for receiv'g water imp. assm't	21.0	3.2	Y	Y	Y
AP	SCI	WM	Drainage & effects on nutrients & runoff	Determine impacts of agr. tile drainage on water qual. of runoff	90.0	0.1	Y	Y	Y
AP	POL	WM	Implementation of CURB Plans	Financial assistance for remediation	750.0	2.0	Y	Y	Y
GA	POL	DO	Water Resources Branch Strategic Planning	Develop a strategic planning process for the Branch	8.0	2.8	Y	Y	Y
GA	DM	L	Provide Admin/financial Support	Provide admin/financial support for section and Dorset Res. Centr	396.0	4.6			
GA	PCS	MST	Branch Budget Planning & Control	Develop & maintain budget control procedures and report status	30.3	2.5	Y	Y	Y
GA	DM	MST	AES Migration to Wordperfect	Implement a word processing system based on Wordperfect	7.5	4.0	N/A	N/A	N/A
GA	DM	MST	Systems PLanning and Co-ordination	Systems standards, acquisition, corporate database development	140.0	1.0	Y	Y	N/A
GA	DM	MST	LAN and Data Communications Development	Provide shared utilities and communications between PCs.	13.5	2.0	Y	Y	Y
GA	DM	MST	Branch Filing System	Set up and maintenance of a Branch filing system	15.3	2.0			
GA	PCS	MST	Administrative Support	Provision of administrative services and support for WRB	401.3	7.0	Y	Y	Y
GA	DM	MST	MISA Program Planning and Reporting	Scheduling of and reporting on MISA program activities	37.6	2.5			
GA	DM	MST	Database Development	Database integration/development and renovation planning	24.0	2.0	Y	Y	Y
GA	DM	MST	Program Information	Provide program info to Ministry, public and other stakeholders	12.6	2.0			
RT	DM	DW	Drinking Water/Technology Assessment	Review present conditions & determine optimum treatment strategy	71	1	Y	Y	Y
RT	SCI	DW	Dr.Wat. - Tech. Advisory Services	Tech.asst.in upgrade/design/appr. plants	76.6	3.3	Y	Y	Y
RT	SCI	DW	Drinking Water - Technol. Devel.	Devel.& adapt DW treat.technol. for Ont.	98.0	2.0	Y	Y	Y
RT	PCS	DW	Drinking Water: Technology and Liaison	Carry out drinking water tech. transfer to a wide rang of clients	27	0.9	Y	Y	Y
RT	DM	GL	Stat. Methods for Data below Detection	Develop statistical methods for data below detection limits	32	0.22	Y	Y	Y
RT	SCI	GL	QA/QC Methods Devel.	Monitor qual. of field sampling methods	1.0	0.2	Y	Y	Y
RT	SCI	GL	G.L. Trib. Mouth Biomonitoring	Ident.contam.contrib.from major tribs/GL	20.0	0.2	Y	Y	Y
RT	SCI	GL	Rand Model Development	Pred.wq & hydrodyn.for multi-s'rce disc.	0.0	0.2	Y	Y	Y
RT	SCI	GL	Low-Level Detect. Vol.Org.Contam	Detect vol,contaminants in ppt range	0.0	0.2	Y	Y	Y

APPENDIX 1 – WATER RESOURCES BRANCH PROGRAMS–1991

PROG	SUBCAT	SECT	PROGRAM NAME	PROGRAM DESCRIPTION	DOE_000	P_Y	PRODUCT	CLIENT	CLIENTUSE
RT	SCI	L	Lakeshore Capacity Model	Reform.of Trophic Status Comp. of LCSM	45.0	0.3	Y	Y	Y
RT	SCI	L	APIOS–TASK 2–Ions & Nutrients–M–H	Mon.deposition of ions &nutrients–Musk./Haliburton lakes	0.0	0.6	Y	Y	Y
RT	SCI	L	APIOS–TASK 2–Algonquin park	Ecol.impacts–Acid precip.on stream insects–algonquin Pk.	0.0	1.0	Y	Y	Y
RT	SCI	L	Bioaccum. Nutrients by Forest	Quant.contrib.mineral uptake by forests	0.0	0.3	Y	Y	Y
RT	SCI	L	APIOS–Lake and Watershed Balances	Determ.quant.inputs of substances&chem.response of lakes	0.0	1.4	Y	Y	Y
RT	SCI	L	Mineral Weathering Rates	Eval.eff.of acid on weathering minerals	0.0	0.1	Y	Y	Y
RT	SCI	L	CORTS Impl.–Sturgeon–Rice Lakes	Construct nutrient budgets for Rice and Sturgeon Lakes	34.0	1.9	Y	Y	Y
RT	SCI	L	Modelling Eff. Acid Dep. on Lakes	Devel.models re: eff.acids on lake chem.	0.0	0.5	Y	Y	Y
RT	SCI	L	APIOS–Chemical Fluxes & Neutralization	Mon.chem.fluxes&neutralization processes–Stream courses	0.0	1.0	Y	Y	Y
RT	SCI	L	Role of Wetlands in Chem. Cycles	Effect of wetlands on recovery aq.syst.	0.0	0.0	Y	Y	Y
RT	SCI	L	APIOS–TASK 2–Zooplankton/micro invert.	Monitor zooplankton/micro–inv. in pre–cambrian lakes	0.0	2.1	Y	Y	Y
RT	SCI	L	Tox. Ident/Reduction Eval.	Proc.deter.causes of tox.in complex eff.	44.0	0.7	Y	Y	Y
RT	SCI	L	APIOS Algae Studies	Determine long–term trends–phytoplankton/algae species	0.0	1.7	Y	Y	Y
RT	SCI	L	Small Lakes Management	Design & Eval. Lake Mgmt. Procedures	123.7	1.3	Y	Y	Y
RT	SCI	L	Tox. of Metals – Biota–Soft Wat.	Determine toxic thresholds of metals	0.0	0.2	Y	Y	Y
RT	SCI	L	Sublethal & Chronic Toxic. Tests	Devel. sensitive biological test proc.	83.5	1.2	Y	Y	Y
RT	PCS	L	Watershed Manipulation Experiments	Co–fund external agencies conducting WME to determine terr. loads	0.0	0.0	Y	Y	Y
RT	SCI	L	APIOS–Trace Metal Cycling	Mon.trace metal cycling in calibrated watersheds–Muskoka	0.0	0.3	Y	Y	Y
RT	SCI	L	APIOS–Long Term Trends in Aquatic Chem.	Measure long–term aqu.chem.trends–Musk.–Haliburton Lakes	0.0	1.8	Y	Y	Y
RT	SCI	L	APIOS–Soil/Soil Water Interactions	Mon.soil/soil water interactions in forested ecosystems	0.0	1.1	Y	Y	Y
RT	SCI	L	Inputs of Hg Musk–Halib. Lakes	Determine rel. importance of Hg sources	0.0	1.7	Y	Y	Y
RT	SCI	MM	Eval/Devel/Demo STP Technology	Cost eff.treat.tech. & oper. strategies	102.0	2.5	Y	Y	Y
RT	SCI	MM	R & T Devel. CSO Poll. Abate.	Stormwater BMP,u.v. disinfection, etc.	375.0	0.5	Y	Y	Y
RT	PCS	MM	Research/Technology Transfer	Transfer new and current R&T to Unit's client groups	33.0	0.4	Y	Y	Y
RT	SCI	WM	RAC project	Dev.methods–estimating design low flows–ungauged locales	100.0	0.1	Y	Y	Y
RT	SCI	WM	RAC project	Develop expert systems for water quality assessment	71.0	0.5	Y	Y	Y
RT	SCI	WM	Mutagenicity Testing	Ident.& assm't.of env. mutagenic hazards	25.0	1.8	Y	Y	Y
RT	SCI	WM	Tumours in Wild Fish	Relate fish tumours/disease to poll'n.	90.0	2.1	Y	Y	Y
RT	SCI	WM	Eff.Acidif. on Metal Conc.– Fish	Links metals in fish and w.q. parameters	15.0	0.4	Y	Y	Y
RT	SCI	WM	Sources of Bioaccum. Pollutants	Devel.biomon.techniques to ident sources	10.0	1.0	Y	Y	Y

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PROG	SUBCAT	SECT	PROGRAM NAME	PROGRAM DESCRIPTION	DOE_000	P_Y	PRODUCT	CLIENT	CLIENTUSE
SM	SCI	DO	Aquatic State of Environment Report	Comprehensive review of the state of Ont.water resources	N/A	1.0	Y	Y	Y
SM	PCS	DW	Oak Ridge Moraine Groundwater Evaluation	Assess groundwater resources of Oak Ridges Moraine	50	0.1	Y	Y	Y
SM	SCI	DW	Drinking Water - Contam.assess.	Tech.assess.of specific conts.&recommend remedial actions	20.0	0.8	Y	Y	Y
SM	PCS	DW	Water Well Management Program	Administer Reg. 612-OWRA & provide info on water wells to clients	190	3	Y	Y	Y
SM	SCI	DW	Pesticides prgm.- Groundwater	Assess fate and impact of pesticides on ground water	N/A	0.5	Y	Y	Y
SM	SCI	DW	DWSP	Conduct drinking water surveillance program	250.0	4.0	Y	Y	Y
SM	SCI	DW	APIOS- Groundwater	Assess impact of acid precip. on groundwater	N/A	0.3	Y	Y	Y
SM	SCI	GL	Hamilton Harb. Sed. Bioassm't	Estab. toxicity of Ham.Harb. sediments	0.0	0.2	Y	Y	Y
SM	SCI	GL	Pilot site stdy-St.Mary's River	Lon-term effluent mon.of St.Marys river re:water quality	0.5	0.1	Y	Y	Y
SM	DM	GL	Systems Support	Data analysis, hardware/software maintenance	87.8	3.8	Y	Y	Y
SM	SCI	GL	Lake Superior/N. Channel Biomonitoring	Ass.nearshore cont.uptake-Lk.Superior N.Channel embayment	0.0	0.1	Y	Y	Y
SM	SCI	GL	Sed.assess.-Algoma Slip	Sample and assess Algoma slip sediments	50.0	0.2	Y	Y	Y
SM	SCI	GL	Sed.assess.-Algoma Slag Dump	Assess Algoma slag dump nearshore sediments	0.0	0.2	Y	Y	Y
SM	SCI	GL	L.Ont. Sediment-Benthos Integ.	Integrate data - benthos/phys/chem.env	0.0	0.1	Y	Y	Y
SM	SCI	GL	St. Lawrence B. Bacti.Conditions	Assess Bacti cond.St.Law.R.near Cornwall	20.0	0.2	Y	Y	Y
SM	SCI	GL	Sed.assess.-Spanish River	Charact. Spanish Rvr./Hbr.suspended solids.est.loadings	0.0	0.2	Y	Y	Y
SM	SCI	GL	Bioavail.stdy-Peninsula Harbour	Assess Peninsula Hbr.sediment characteristics	0.0	0.2	Y	Y	Y
SM	SCI	GL	St.Catharines Nearshore Circ.	Circulation patterns-St.Cath.waterfront	0.0	0.1	Y	Y	Y
SM	SCI	GL	Benth.assess-St. Clair River	Determine trends in St.Clair River benth.macro-invs.	37.5	0.3	Y	Y	Y
SM	SCI	GL	Niagara R. Caged Mussels/Leeches	Investigate contam. source areas	0.0	0.1	Y	Y	Y
SM	SCI	GL	Severn Sound - Georgian B. Exch.	Estim.water exch.between Sev.S'nd & G.B.	0.0	0.2	Y	Y	Y
SM	SCI	GL	Cornwall Hydraulics Study	Hydr.characteristics St.Law.R, Cornwall	7.0	0.1	Y	Y	Y
SM	SCI	GL	Severn Sound Marina Survey	Assess W.Q. impact of boating activities	0.0	0.1	Y	Y	Y
SM	SCI	GL	Cornwall MISA Modelling	Model impact of effluents on St.Law.R.	0.7	0.2	Y	Y	Y
SM	SCI	GL	Parry Sound Surv.Baseline Study	Env. conditions in Parry Sound Harbour	60.0	0.3	Y	Y	Y
SM	DM	GL	Nipigon Bay Sediment Survey	Nature/extent sed.contam.in Nipigon Bay	0.0	0.1	Y	Y	Y
SM	SCI	GL	Tr. Contam. Biomon./Toronto	Estab. baseline-Tor. waterfront biomon.	0.0	0.3	Y	Y	Y
SM	SCI	GL	Toronto Harbour Exchange	Wat. exchange rates L.O. & Toronto Harb.	85.0	0.2	Y	Y	Y
SM	SCI	GL	Toronto Waterfront Sed. Survey	Survey of sed.qual./Toronto waterfront	0.0	0.2	Y	Y	Y
SM	SCI	GL	Hamilton Harb. Bacti Survey	Bacti Qual. at potential swimming sites	0.0	0.1	Y	Y	Y
SM	SCI	GL	Collingwood Harb. Sed. Cores	Assess sediment quality in the Harbour	0.0	0.1	Y	Y	Y
SM	SCI	GL	Port Hope Sed. Bioassm't Study	Assess toxicity of harbour sediments	14.0	0.1	Y	Y	Y
SM	SCI	GL	Collingwood Harbour W.Q. Survey	Nutrient & bact. sources & effects	46.0	0.2	Y	Y	Y
SM	SCI	GL	St.Law.R. Hydraulic Meas.Study	Measure currents & channel discharges	0.7	0.1	Y	Y	Y
SM	SCI	GL	Long-term Sensing Sites	Mon.variation water,sed,bio.qual.in G.L.	100.0	0.3	Y	Y	Y
SM	SCI	GL	Bay of Quinte Tox.Contam. Study	Survey of metal & organics sed. quality	0.0	0.3	Y	Y	Y

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PROG	SUBCAT	SECT	PROGRAM NAME	PROGRAM DESCRIPTION	DOE_000	P_Y	PRODUCT	CLIENT	CLIENTUSE
SM	SCI	GL	Trace Contam. Cataraqui Bay,B.Q.	Assess industrial contam.on W.Q. in Bay	0.0	0.1	Y	Y	Y
SM	DM	GL	Data Management	QC,data retrieval,etc.GLS component SIS	60.0	1.4	Y	Y	Y
SM	SCI	GL	Collingwood Harb. Biomon. Study	Env. conditions in SW part of harbour	0.0	0.2	Y	Y	Y
SM	SCI	GL	Trib.& STP loads-L.Ont/Toronto	Assess contam.load from tribs.& 4 STPs	170.0	0.3	Y	Y	Y
SM	SCI	GL	Baseline study-Thunder Bay Harbour	Determine baseline water/sediment qual.-Thunder Bay Hbr.	0.0	0.1	Y	Y	Y
SM	SCI	GL	Sed. Metals Bioavail. (RAPs)	Eval.bio.signif. of metals in sediment	75.0	0.2	Y	Y	Y
SM	SCI	GL	L. Erie Harbours Synop. Survey	Env.conditions in L.Erie small harbours	30.0	0.1	Y	Y	Y
SM	SCI	GL	Cornwall Sed.Remediation Study	Assess Contam.sed.near Cornwall,St.Law.R	20.0	0.1	Y	Y	Y
SM	SCI	L	Great Lakes Nearshore Trophic Status Monitori	Nearshore mon.to determine time trends-troph.status inds	29.1	0.7	Y	Y	Y
SM	SCI	L	Lake of the Woods Ass.	Assess nutr.status by remote sensing-Lake of the Woods	15.0	0.5	Y	Y	N/A
SM	SCI	L	MISA Regs.- Daphnia magna testing	Conduct acute lethality tests of effluents-trout/daphnia	200.0	3.6	Y	Y	Y
SM	SCI	L	APIOS-TASK 2- Musk.-Hal. Invert. species	Mon.Muskoka-Haliburton lakes for sensitive inv. species	0.0	1.0	Y	Y	Y
SM	SCI	L	RAP Support	Assess limnology of Severn Sound and Bay of Quinte	2.0	0.6	Y	Y	Y
SM	SCI	L	Large Lakes Survey	Large lks.surv.(Lake Nipiss.,Lk of Bays,Gravenhurst Bay)	35.0	0.7	Y	Y	N/A
SM	SCI	L	Regional support	Provide analytical service- surface scums,slime,etc.	25.0	0.6	Y	Y	Y
SM	SCI	L	APIOS-Biological Surveys	Mon.Muskoka-Haliburton lakes for sens.aquatic species	0.0	0.1	Y	Y	Y
SM	PCS	L	Aq.Eff. Timber Mgmt. Study Des'gn	Devel.plan for eval. effects timber mgmt	4.0	0.3	Y	Y	Y
SM	SCI	L	Cladophora Contaminants	Determ. long-term trends-metals & organics on Cladophora	4.0	2.1	Y	Y	Y
SM	POL	L	LSEMS Implementation	Implement recommendations of LSEMS	0.0	0.7	Y	Y	Y
SM	DM	MM	Monitor Provincial Beach closings	Provide info on status of Prov. beaches; update database & report	24.0	0.2	Y	Y	
SM	DM	MO	UMIS- Maintenance & Reporting	Production of annual munic. disch. rpts	100.0	2.3	Y	Y	Y
SM	DM	MO	MOCHA,MIDES,MAP Support/Testing	Data base systems for MISA mon. data	50.0	0.8	Y	Y	Y
SM	DM	MO	MISA Data Base-Mod.4-Eff.Data Anal.&Rep.	Anal. MISA eff. mon. data & rpt	250.0	4.0	Y	Y	Y
SM	DM	MO	DB-2 Project - User Testing	Move IMIS data to DB-2, more flexible	25.0	0.3	Y	Y	Y
SM	DM	MO	PC-based UMIS-SAS System	System assess compliance-guidlns/C of A	50.0	0.5	Y	Y	Y
SM	DM	MO	MISA Data Base System - Module II-QA/QC	QA/QC system for MISA monitoring data	15.0	0.3	Y	Y	Y
SM	DM	MO	Ind. Discharge Report & IMIS	Prod.annual Ind.Disc.Rpt.& maintain IMIS	105.0	2.0	Y	Y	Y
SM	DM	MO	MISA Data Base-Mod.3-Eff.Data Maint.Sys.	Download MISA data for anal. & rpts.	50.0	0.5	Y	Y	Y
SM	DM	MO	MISA Data Base - Module I-Stat. Analysis	Devel.anal.,display for MISA mon. data	50.0	0.5	Y	Y	Y
SM	DM	MST	Systems Planning - GIS	Geographical Information systems framework planning	53.9	1.0	Y	Y	
SM	DM	WM	Anal.& Mapping W.Q.in SE Ontario	Develop surf.water qual.maps for SE Ont.	35.0	0.1	Y	Y	Y
SM	SCI	WM	Sediment Prgm.	Ass.current state of sediments-contaminates areas of Ont.	N/A	2.8	Y	Y	Y
SM	SCI	WM	Sportfish Contaminant Research - Advisory	Provide scientific support for Sport fish Cont.mon.prgrm.	5.0	0.8	Y	Y	Y
SM	DM	WM	Water Quality Assessment - PWQMN	Anal.,eval.,assm'mt. of PWQMN data	N/A	0.0	Y	Y	Y

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PROG	SUBCAT	SECT	PROGRAM NAME	PROGRAM DESCRIPTION	DOE_000	P_Y	PRODUCT	CLIENT	CLIENTUSE
SM	SCI	WM	Enhanced Trib. Mon. Prgm.– Sediment	Conduct sediment quality surveys–large tributary mounts	20.0	0.2	Y	Y	Y
SM	SCI	WM	Water/Sediment Quality Survey	Scan for priority contaminants–outlets of 5 Lk.Ont.tribs.	N/A	0.2	Y	Y	Y
SM	PCS	WM	Water Quantity Network Program	Co–ordinate operation of streamflow surveys & analysis of data	306	0.5	Y	Y	Y
SM	DM	WM	Statistical Methods W.Q. Data	Data anal. for trends,spat.anal.,mapping	N/A	0.2	Y	Y	Y
SM	SCI	WM	Pesticide Surveillance Monitoring Prog.	Surv.of pesticides&org.residue conts. at suspected areas	N/A	0.3	Y	Y	Y
SM	SCI	WM	Non P.S. Mgmnt. Prog.– Pesticides	Mon.program for pesticide residues–large tributaries	N/A	0.2	Y	Y	Y
SM	PCS	WM	PWQMN – Non–Point Source Pollution	Manage and maintain 112 NPS PWQMN stations; assess data re PWQ	N/A	0.5	Y	Y	Y
SM	DM	WM	Devel.Procedures,etc.Water Quality Assmt.	Assm't models,techniques–rec.water lim't	100.0		Y	Y	Y
SM	PCS	WM	PWQMN – Point Source Pollution	Co–ordinate the PWQMN program for 171 STP & 63 industr. stations	N/A	0.5	Y	Y	Y
SM	SCI	WM	Enhanced Tributary Monitoring Program	Mon.large Grt.lks.tributaries re: est.poll.loadings	20.0	0.2	Y	Y	Y
SM	PCS	WM	Shoal Lake Study – Advisement	Provide advice on tech. aspects of Shoal Lake Watershed Mgmt. St.	N/A	0.02	Y	Y	Y
SM	PCS	WM	PWQMN Planning and Evaluation	Ensure the PWQMN program meets changing MOE needs and priorities	N/A	0.3	Y	Y	Y
SM	SCI	WM	Nearshore Y–O–Y Fish Contaminant Prg.	Conduct young–of–the–year fish contaminants surv.prgm.	15.0	1.0	Y	Y	Y
SM	DM	WM	Info. System Prgm – Data Mgmt	Manage water qual. & quant. data bases	N/A	0.3	Y	Y	Y
SM	SCI	WM	Sport Fish Contam. Mon. Prgm.	Sample,analyse,report(Guide)sp.fish data	N/A	2.0	ENV	Y	Y
SM	DM	WM	PWQMN Data Compliance Anal.	Summary compliance/PWQO basin w.q. data	N/A	0.0	Y	Y	Y
SM	PCS	WM	WRB Laboratory Test Load Projection	Plan and Forecast testload requirements for Unit sampling program	N/A	0.05	Y	Y	Y
SM	PCS	WM	SWEEP(Sub–Program 3: Pilot Watershed Pr)	Monitor reduc. in SS & P from implementation of SWEEP on farms	85	0.5	Y	Y	Y
SM	DM	WM	Stat.Risk Assess.– Pollution in Streams	Conduct stat.risk assess.of poll.sources in streams	N/A	0.2	Y	Y	
SM	SCI	WM	PWQMN Prgm.– SE Ont. Water Quality Eval.	Provide detailed analysis/eval.–ambient WQ in SE region	35.0	0.2	Y	Y	Y
SM	SCI	WM	Phosph. Reduction Management Strategy	Est.loadings of phosph.–tributaries draining to Grt.lks.	N/A	0.2	Y	Y	Y